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ABSTRACT

This issue of "Social Sciences in Forestry" provides an annotated bibliographic listing of 648 current references arranged according to four major areas of forestry: (1) social sciences applications to forestry at large (containing citations on resources, history, legislation, policy, planning, appraisal and valuation, investment and finance, taxation, subsidization, agroforestry, economics, education, research, technology, and environmental concerns); (2) social sciences applications to forest management (with references on multiple use management, ownership of public and private lands, labor, and protection); (3) production of forest goods and services (addressing areas such as outdoor recreation, wilderness and range management, urban forestry, watershed management, fish and wildlife, and wood production); and (4) social sciences applications to forest industries (focusing on wood-using industries and other forest industries, marketing and trade, and transportation). The four major areas are subdivided into a total of 42 subheadings. An author index is provided. (TK)

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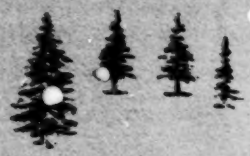

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SOCIAL SCIENCES IN FORESTRY
A Current Selected Bibliography and Index

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PREFACE

References submitted by foreign coorperatois are acknowledged by the addition of the cooperator's initials directly following the annotation. We welcome contributions of either references to publications or the publications themselves. We would also welcome additional foreign cooperators, particularly from countries not represented on the title page of this issue. Anyone interested in serving as a cooperator should write to us at the University of Minnesota Forestry Library, 1530 North Cleveland Avenue, St. Paul, MN 55108.

Loans or xerox copies of publications indexed in Social Sciences in Forestry are available from the Interlibrary Loan Division, St. Paul Campus Libraries, 1984 Buford Avenue, St. Paul, MN 55108. U.S.D.A. employees, please use Standard Form AD-245 in submitting your requests. Others, please submit requests on the standard interlibrary loan forms through your nearest library.

We gratefully acknowledge the contributions of two people who have helped to bring this issue to press: Heidi Peissig, data entry operator, and Marian Eriksson, programmer.

Jean Albrecht
Patricia Rodkewich

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OCIAL SCIENCES APPLIED TO FORESTRY AT LARGE

GENERAL PUBLICATIONS

1275 Buckland, P. and Armitage, I., 1986. **Tropical forestry in the South Pacific: A bibliography**. Wellington, New Zealand Forest Service. 50 pp.

A select d bibliography including references of relevance to forest management, forest products development, and wood utilization in developing South Pacific Island countries.

1276 Carpenter, S.B., editor, 1986. **Proceedings: Southern Forestry Symposium, Atlanta, GA, Nov. 19-21, 1985**. Stillwater, Oklahoma State University, Agricultural Conference Services. 310 pp.

Sponsored by National Association of Professional Forestry Schools and Colleges, Southern Region, and others. Selected papers are indexed in this issue.

1277 Fulthorpe, R. and Buffinga, A., editors, 198? **Woodshock: The perception and use of forested land in Canada**. Toronto, Sierra Club of Ontario. 259 pp.

Proceedings of a conference held in Toronto, Oct.17-19, 1985. Includes papers from six workshops: (1) The Canadian forest industry; (2) Forest management and renewal - Eastern Canada; (3) Forest management and renewal - Western Canada; (4) Withdrawals and multiple use; (5) Public involvement in resource planning: and (6) Industrial and social policy. (JD)

1278 Percy, M.B., 1986. **Forest management and economic growth in British Columbia**. Ottawa, Canadian Government Publishing Centre. 88 pp.

A study prepared for the Economic Council of Canada. Includes chapters on the importance of forest products to British Coulumbia, the current framework of forest management policies, the consequences of current forest management policies, and a general equilibrium model of the forest industry and the British Columbia economy.

1279 Trew, M., 1986. **European forestry - a state of mind**. Forest Planning Canada 2(5):21.

"The real difference between European forestry and what is practiced...in B.C. is the degree of concern for the forests themselves rather than for the industry to which they are related."

1280 U.S. Forest Service, 1987. **Report of the Forest Service fiscal year 1986**. U.S. Forest Service. 172 pp. + map.

1281 Wiant, H.V., Jr., Yandle, D.O., and Kidd, W.E., editors, 1986. **Forestry Microcomputer Software Symposium, Morgantown, WV, 1986**. Morgantown, West Virginia University. 747 pp.

Selected papers are indexed in this issue.

FOREST RESOURCES: REGIONAL, NATIONAL, INTERNATIONAL

1282 Babiker, A.A., Musnad, H.A., and Shaddad, M.Z., 1985. **Wood resources and their use in the Nuba Mountains.** In: Davie , H.R.J., ed. Natural resources and rural development in arid lands: Case studies from Sudan. Tokyo, United Nations University. pp.30-59.

1283 Bechtold, W.A., Brown, M.J., and Tansey, J.B., 1987. **Virginia's forests.** U.S. Forest Service, Resource Bulletin SE-95. 89 pp.
"This report presents the principal findings concerning the extent and condition of forest land, associated timber volumes, and rates of growth and removals." (p.iv)

1284 Birdsey, R.A. and Bertelson, D.F., 1987. **Forest statistics for Southeast Oklahoma counties - 1986.** U.S. Forest Service, Resource Bulletin SO-119. 30 pp.
Tabulates forest resource information from a new inventory of the Southeast unit of Oklahoma.

1285 Birdsey, R.A. and Bertelson, D.F., 1987. **Forest statistics for Northeast Oklahoma counties - 1986.** U.S. Forest Service, Resource Bulletin SO-120. 30 pp.
Tabulates forest resource information from a new inventory of the Northeast unit of Oklahoma.

1286 Bohning, R.A., 1987. **Manitoba's forests.** Northern Forestry Centre, Forestry Report no.32. 16 pp.

1287 Bohning, R.A., 1987. **Saskatchewan's forests.** Northern Forestry Centre, Forestry Report no.33. 16 pp.
Emphasis is on the forest industry and the forest land base.

1288 Buckley, G.P., 1987. **The forests of the Jos Plateau, Nigeria: 1. The development of the forest estate.** Commonwealth Forestry Review 66:139-150.

1289 Giessman, N.F. et al., 1986. **Distribution of forestland in Missouri.** Missouri Academy of Science Transactions 20:5-14.
"This study was initiated to determine the current amount and distribution of forestland by county and statewide." (p.5) Co-authors are: T.W. Barney, T.L. Haithcoat, J.W. Myers, and R. Massengale.

1290 Kelly, J.F. and Hines, F.D., 1987. **Forest statistics for North Mississippi counties - 1987.** U.S. Forest Service, Resource Bulletin SO-122. 39 pp.
Tabulates forest resource information from a new inventory of North Mississippi counties.

1291 Kelly, J.F. and Hines, F.D., 1987. **Forest statistics for Mississippi Delta counties - 1987.** U.S. Forest Service, Resource Bulletin SO-126. 34 pp.
Forest resource information is tabulated from a new inventory of Mississippi Delta counties.

1292 Lewicki, W., 1986. [Forest resources and wood economy in countries of European Common Market.] Sylwan 130(8):1-9.
In Polish.

1293 May, D.M. and Bertelson, D.F., 1986. **Forest statistics for Louisiana parishes.** U.S. Forest Service, Resource Bulletin SO-115. 59 pp.
Tabulates forest resource information from a new inventory of Louisiana parishes.

1294 Rudis, V.A. and Birdsey, R.A., 1986. **Forest resource trends and current conditions in the lower Mississippi Valley.** U.S. Forest Service, Resource Bulletin SO-116. 7 pp.

1295 Saucier, J.R., 1986. **The South's changing timber resource and its implications for utilization.** In: Carpenter, S.B., ed. Proceedings: Southern Forestry Symposium... 1985. pp.171-180.

1296 Tansey, J.B., 1987. **Forest statistics for South Carolina, 1986.** U.S. Forest Service, Resource Bulletin SE-93. 53 pp.

1297 Tansey, J.B., 1987. **Forest statistics for the Southern Coastal Plain of South Carolina, 1987.** U.S. Forest Service, Resource Bulletin SE-92. 49 pp.

1298 Zinn, G.W. and Jones, K.D., 1987. **Forests and the West Virginia economy. Volume 8: Summary of findings, conclusions and recommendations.** West Virginia University, Agricultural and Forestry Experiment Station, Bulletin 691-volume 8. 26 pp.
This is the eighth and final volume in a series of reports on West Virginia's forest resources.

HISTORY

1299 Allin, C.W., 1987. **The Leopold legacy and the American wilderness.** In: Tanner, T., ed. Aldo Leopold: The man and his legacy. pp.25-38.

1300 Flader, S., 1987. **Aldo Leopold and the evolution of a land ethic.** In: Tanner, T., ed. Aldo Leopold: The man and his legacy. pp.3-24.

1301 Kilar, J.W., 1987. **Great Lakes lumber towns and frontier violence: A comparative study.** Journal of Forest History 31:71-85.
The author compares the life of the early lumbermen in the Great Lakes states with that of the cowboys in the American west.

1302 Nash, R., 1987. **Aldo Leopold and the limits of American liberalism.** In: Tanner, T., ed. Aldo Leopold: The man and his legacy. pp.53-85.

1303 Tanner, T., editor, 1987. **Aldo Leopold: The man and his legacy.** Ankeny, Iowa, Soil Conservation Society of America. 175 pp.
A collection of papers, most of which were first presented at the Aldo Leopold Centennial Celebration held at Iowa State University in

1986. Selected papers are indexed in this issue.

1304 Thirgood, J.V., 1987. **Cyprus: A chronicle of its forests, land, and people.** Vancouver, University of British Columbia Press. 371 pp.

1305 Totman, C., 1987. **Lumber provisioning in early modern Japan, 1080-1850.** Journal of Forest History 31:56-70.
"To meet urban demand for timber, Japanese lumbermen developed a complex provisioning system whose character changed as the centuries passed." (p.56)

1306 Williams, M., 1987. **Industrial impacts on the forests of the United States, 1860-1920.** Journal of Forest History 31:108-121.

LEGISLATION

1307 Coggins, G.C. and Wilkinson, C.F., 1987. **Federal public land and resources law.** 2d ed. Mineola, NY, Foundation Press, Inc. 1066 pp.
Includes chapters on: The timber resource; the range resource; the wildlife resource; the recreation resource; and the preservation resource (including wilderness preservation).

1308 Coggins, G.C., 1984. **Public rangeland management law: FLPMA and PRIA.** In: National Research Council. Developing strategies for rangeland management. pp.1901-1976.
An analysis of two statutes governing public rangeland management: The Federal Land Policy and Management Act of 1976 and the Public Rangelands Improvement Act of 1978.

1309 Cubbage, F.W., Siegel, W.C., and Haines, T.K., 1987. **Water quality laws affecting forestry in the eastern United States.** In: Proceedings Symposium on Monitoring, Modeling, and Mediating Water Quality. American Water Resources Association Technical Publication Series TPS-87-2:597-609.
"The impact of silvicultural practices on water quality and the history of federal water quality legislation affecting forestry are reviewed."

1310 Henly, R.K. and Ellefson, P.V., 1986. **Cost and effectiveness of legal mandates for the practice of forestry on private land: Experiences with state forest practice laws in the United States.** In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:358-365.

1311 Henly, R.K., Cubbage, F.W., and Siegel, W.C., 1987. **State and local regulation of forest practices: A bibliography.** University of Minnesota, Department of Forest Resources, Staff Paper Series no.61. 16 pp.
The areas of regulation most strongly represented in this bibliography are: history and development, structure and function, legal foundations and challenges, political processes and

considerations, administration, public and private sector costs, and effectiveness. (p.i)

1312 Mackintosh, H., 1987. **Tree Preservation Orders: The differing needs of urban and rural areas**. Quarterly Journal of Forestry 81:158-168.
The author concludes that the Tree Preservation Orders system "appears to be fundamentally unsuited to woodland conditions in rural areas. In order to ensure the long-term conservation of trees and woodlands in rural areas, major legislative reforms are needed..." (p.158)

1313 Olsen, E.D., Keough, D.S., and LaCourse, D.K., 1987. **Economic impact of proposed Oregon Forest Practices Rules on industrial forest lands in the Oregon Coast Range: A case study**. Oregon State University, Forest Research Laboratory, Research Bulletin 61. 15 pp.

1314 Schmithusen, F., 1986. **The changing role of legislation related to forest conservation and forest resources development**. In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:270-273.

1315 Wilkinson, C.F. and Anderson, H.M., 1987. **Below-cost sales: The legal structure**. In: LeMaster, D.C. et al., eds. Below-cost sales. pp.23-34.
Reviews the legal history of the below-cost timber sale issue and then focuses on the provisions in the National Forest Management Act that relate to the economics of below-cost sales.

POLICY

1316 Bowonder, B., 1987. **Integrating perspectives in environmental management**. Environmental Management 11:305-315.

1317 Douglas, L., 1987. **Public involvement, rights and responsibilities**. In: Fulthorpe, R. and Buffinga, A., eds. Woodshock: The perception and use of forested land in Canada. pp.171-174. (JD)

1318 Gendreau, C., 1986. **Historical considerations and evolution of the forest policies for small woodlot owners of Quebec**. In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20 339-347.

1319 Grant, P., 1987. **Public involvement in British Columbia land allocation issues**. In: Fulthorpe, R. and Buffinga, A., eds. Woodshock: The perception and use of forested land in Canada. pp.164-168. (JD)

1320 Grant, P.S., 1987. **Structure of the Forest Service and its economic performance**. New Zealand Forestry 32(1):2-4.
"This paper quantifies the Forest Service's inefficient use of capital. It also shows how the Forest Service (NZ) has understated its

growing costs, exaggerated the profitability of exotic forestry and concealed its lack of accountability with misleading financial accounts." (p.3)

1321 Greig, P.J., 1986. **Forest policy developments in Victoria.** Australian Forestry 49:197-202.
"The changes in Victorian forestry since 1982 are described and explained in terms of cultural influences in forestry over the last 70 years." (p.197)

1322 Handa, R., 1986. **On the principles of Japanese forest policy since 1950.** In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:331-338.

1323 Horgan, G.P., 1987. **Structure of the Forest Service and its economic performance - a reply.** New Zealand Forestry 32(1):4-5.

1324 Ingram, H. and McCool, D., 1984. **The relevance of management information systems to policy choices: Lessons from the Bureau of Land Management.** In: National Research Council. Developing strategies for rangeland management. pp.1785-1809.
"The intent of this paper is to critically examine the policy implications of using management information systems, particularly for the Bureau of Land Management." (p.1785)

1325 Keltikangas, M., 1986. **Quantification problems in the design of forest policy programs.** In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:293-297.

1326 Kirby, P.C., 1986. **How the 1986 elections affect forest policy.** Forest Watch 7(5):15-18.

1327 Kishine, T., 1986. **Optimizing simulation model on forest policy.** In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:396-418.
Subtitle: "Development of mathematical model for forest policy formation and its optimizing simulation." "This paper designs an Economy-Welfare-Environment Adjustment System model (EWEAS model or EWE model in short) which consists of the circular flow of the economic, the welfare, and the environment system of forestry." (p.396)

1328 Krott, M., 1986. **The politics of forest bureaucracy as a subject of comparative studies.** In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:282-285.

1329 Laarman, J.G., 1987. **Forest policy and foreign policy: The politics of trade and aid in a sensitive world.** Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.9. [5] pp.
Reprinted from Proceedings 1986 Society of American Foresters National Convention. pp.51-55.

1330 Lewis, G.D., 1986. **The role of policy in forest resource development.** In: Tikkanen, I., ed. Analysis and evaluation of public forest

policies. Silva Fennica 20:348-352.

1331 Merwe, W.H. van der, 1983. **The role of the state in the future developmen_ of the forest and timber industry.** In: Proceedings of the Jubilee Symposia, 1982. University of Scellenbosch, Faculty of Forestry, Communication 98:11-21.
South African forest policy.

1332 Metz, A.M., 1986. **Influence of forest owners as an interest group in achieving the forest policy goals in Finland: The programme 'Forestry 2000'.** In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:286-292.

1333 Papa..astasis, V.P., 1986. **Policy analysis and integrated land use.** In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:274-279.

1334 Riihinen, P., 1986. **Future challenges of forest policy analysis.** In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:260-264.

1335 Tikkanen, I., 1986. **Search for innovative forest policies and programs: The future and role of policy and program analysis.** In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:265-269.

1336 Tikkanen, I., editor, 1986. **Analysis and evaluation of public forest policies.** Silva Fennica 20:251-427.
A special issue which includes 22 papers on forest policy and program analysis and evaluation presented at the 18th IUFRO World Congress in 1986 in Ljubljana, Yugoslavia. The papers are indexed in this issue.

1337 Vehkamaki, S., 1986. **Economic evaluation of forest policy programs.** In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:298-301.

PLANNING

1338 Backiel, A., 1987. **Below-cost timber sales and national forest planning: A national public policy perspective.** In: LeMaster, D.C. et al., eds. Below-cost sales. pp. 7-88.

1339 Campbell, G.E. and Mendoza, G.A., 1987. **Adapting modeling to generate alternatives (MGA) techniques to multiple objective planning models.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.104-117.
The current U.S. Forest Service planning model, FORPLAN, uses multiple objective programming techniques.

1340 Eriksson, L.O., 1987. **Ranking stands with treatment indices.** Scandinavian Journal of Forest Research 2:239-251.
Forest planning in Sweden.

1341 Holder, D., 1987. **Public control over forest planning.** In: Fulthorpe, R. and Buffinga, A., eds. Woodshock: The perception and use of forested land in Canada. pp.168-170. (JD)

1342 Johnson, K.N. and Sessions, J., 1987. **Forest planning: Can it deal with below-cost sales?** In: LeMaster, D.C. et al., eds. Below-cost sales. pp.73-85.
"Forest planning can help address below-cost timber sales through defining the sales that will most efficiently meet the objectives and constraints of each forest planning alternative." (p.73)

1343 Minnesota Division of Forestry, 1987. **Minnesota forest resources plan: Program direction fiscal years 1987-1991. Primary document.** Minnesota Dept. of Natural Resources, Division of Forestry. 198 pp. + app.

1344 Seydack, A.H.W., 1983. **Indigenous forest management planning: A new approach.** In: Proceedings of the Jubilee Symposia, 1982. University of Stellenbosch, Faculty of Forestry, Communication 98:525-553.
"Proposals for a management approach for the indigenous forests of the Southern Cape and Tsitsikamma are presented." (p.525)

1345 Shimotori, S., 1986. **Private and municipal forests and the forest planning system in Japan-trends and problems after World War II.** In: Tikkanen,I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:385-393.

1346 U.S. Congress, 1987. **A review of Forest Service plans to manage National Forests.** Hearings before a Subcommittee of the Committee on Appropriations, U.S. Senate, 99th Congress, 2d Session, Senate Hearing 99-1016. 519 pp.

1347 U.S. Forest Service, 1986. **Final environmental impact statement, 1985-2030, Resources Planning Act Program.** U.S. Forest Service, FS-403. Various pagings.

1348 U.S. Forest Service, Southwestern Region, 1987. **Public comments and Forest Service response to the DEIS, proposed Prescott National Forest Plan.** U.S. Forest Service, Southwestern Region. 382 pp.

APPRAISAL AND VALUATION

1349 Abbott, R.E., 1986. **Concept and importance of "Principles of Valuation" to trees and shrub appraisal.** In: National Urban Forestry Conference, 3rd. Proceedings. pp.39-41.
"There is a definite need to apply the American Society of Appraisers - recognized 'Principles of Valuation' to landscape and tree appraisals." (p.39)

1350 Bishop, R.C., 1987. **Economic values defined.** In: Decker, D.J. and Goff, G.R., eds. Valuing wildlife. pp.24-33.

1351 Bullard, S.H., Straka, T.J., and Matney, T.G., 1987. **FORVAL: A computer program for forest valuation.** Mississippi Agricultural & Forestry Experiment Station, Research Report vol.12, no.23. 4 pp.
FORVAL (FORest VAluation) is a computer program for cash-flow analysis of forestry investments.

1352 Chen, P.Y. and Li, Z., 1984. **[A discussion of the theory of forest valuation.]** Scientia Silvae Sinicae 20:299-306.
Briefly discusses the study of forest valuation in China. In Chinese with English summary.

1353 Council of Tree and Landscape Appraisers, 1986. **Manual for plant appraisers: A handbook of methods, procedures and problems of plant appraisal.** Washington, DC, Council of Tree and Landscape Appraisers. 57 pp.
This manual is intended to serve as a supplement to the 6th edition of the "Guide for Establishing the Value of Trees and Other Plants" published by the Council in 1983.

1354 Ellis, G.M. and Fisher, A.C., 1987. **Valuing the environment as input.** Journal of Environmental Management 25:149-156.
The purpose of this paper is to illustrate an approach to environmental valuation, i.e., "valuation of the environment as an input to the production of a marketed good." (p.149)

1355 Gayer, P.D., Haney, H.L., Jr., and Hickman, C.A., 1987. **Effect of current-use valuation on forestry investment returns in selected Virginia counties.** U.S. Forest Service, Research Note SO-332. 4 pp.

1356 Haley, D., 1986. **The value of public timber - to its owners.** Forest Planning Canada 2(5):5-6.
Stumpage appraisal.

1357 Hite, M., Johansson, P.O., and Lofgren, K.G., 1987. **On optimal rotations when a standing forest has value.** Sveriges Lantbruksuniversitet, Institutionen for Skogsekonomi, Rapport 70. 15 pp.
The social rotation of a standing forest may vary with the commercial rotation period because standing trees may have an impact on social welfare.

1358 Hufschmidt, M.M. et al., 1983. **Environment, natural systems, and development: An economic valuation guide.** Baltimore, Johns Hopkins

University Press. 338 pp.
Co-authors are: D.E. James, A.D. Meister, P.T. Bower, and J.A. Dixon.

1359 Kaiser, H.F., 1987. The use of quantitative values in multiple-use forest evaluations. In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.82-88.

1360 Kato, F., 1985. [Functions and problems of forest valuation in theory and practice.] Allgemeine Forstzeitschrift 40:511-515.
In German.

1361 Kohne, M., 1985. [The interest problem in forest valuation from the viewpoint of the valuation on agricultural land.] Allgemeine Forstzeitschrift 40:520-523.
In German.

1362 Kroth, W. and Bartelheimer, P., 1985. [Age-value factors as an aid in forest valuation.] Allgemeine Forstzeitschrift 40:515-519.
In German.

1363 Matthies, F., 1985. [Valuation of the social functions of the forest--problems and possible solutions.] Allgemeine Forstzeitschrift 40:531-534.
In German.

INVESTMENT AND FINANCE

1364 Blinn, C.R. and Rose, D.W., 1986. CASH: A general cash flow and sensitivity analysis program for conducting project analysis. In: Wiant, H.V., Jr. et al., eds. Forestry Microcomputer Software Symposium. pp.316-330.
"CASH is an interactive, menu-driven program that allows the user to quickly evaluate cash flows and the sensitivity of various project performance measures to changes in cost and revenue activities over the investment period." (p.316)

1365 Brodie, J.D., Kuch, P.J., and Row, C., 1987. Economic analysis of the silvicultural effects of vegetation management at the stand and forest levels. In: Walstad, J.D. and Kuch, P.J., eds. Forest vegetation management for conifer production. New York, Wiley. pp.365-395.
Presents examples of stand-level investment analysis using yield tables and simulation in the case of Douglas-fir and optimization in the case of loblolly pine.

1366 Campbell, G. and Koenig, R., 1987. A financial analysis of upland hardwood even-aged management in Illinois. Illinois Agricultural Experiment Station, Forestry Research Report 87-14. [15]pp.
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financial success of recommended forestry investments."

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1488 Reed, A.S., 1987. **Targeting educational programs to stimulate investments in private forestland.** Ph.D. thesis, University of Minnesota. 171 pp.
413 recipients of Forestry Incentives Program funds were surveyed in an attempt to identify characteristics of nonindustrial private foresters that could be used to distinguish markets for targeting educational programs to stimulate timber production.

1489 Schacht, W.H., O'Rourke, J.T., and Anderson, V.J., 1986. **Range management extension in Morocco - taking it to the people. II. Non-degree training.** In: Joss, P.J. et al., eds. Rangelands: A resource under siege. pp.336-338.

ENVIRONMENTAL CONCERNS

1490 Bingham, G., 1987. **Resolving environmental disputes: A decade of experience.** In: Brower, D.J. and Carol, D.S., eds. Managing land use conflicts. pp.38-48.

1491 Brower, D.J. and Carol, D.S., editors, 1987. **Managing land-use conflicts: Case studies in special area management.** Durham, Duke University Press. 323 pp.
Selected papers are indexed in this issue.

1492 Cormick, G., 1987. **Environmental mediation: The myth, the reality, and the future.** In: Brower, D.J. and Carol, D.S., eds. Managing land use conflicts. pp.27-37.

1493 Dunster, J.A., 1987. **Chemicals in Canadian forestry: The controversy continues.** Ambio 16(2/3):142-148.
The author concludes: "With the higher priority that Canadians are now placing on environmental issues... the chemical controversy will remain a dominant forestry issue in the next decade." (p.148) (JD)

1494 Fritz, E.C., 1983. **The case against clearcutting: Sterile forest.** Austin, TX, Eakin Press. 271 pp.

1495 Hoffman, J.S. and Wells, J.B., 1987. **Forests -- the momentum for a greenhouse effect: Physical, economic, and political limits to curtailing the magnitude of global warming.** In: Shands, W.E. and Hoffman, J.S., eds. The greenhouse effect, climate change, and U.S. forests. pp.43-55.
Scenarios are presented that show the effects of successfully implemented governmental policies to limit greenhouse warming. The difficulties introduced by physical, economic, and political obstacles are evaluated.

1496 Humphries, M., 1986. **Toward a conservation strategy for Canada.** Forest Planning Canada 2(5):22-23.
Summary of a paper presented at a B.C. Wilderness Advisory Committee hearing in Vancouver in Jan., 1986.

1497 Huser, V., 1986. **Mediating forestry issues.** American Forests 92(10):29-31, 50-52.

1498 Innes, J.L., 1987. **Air pollution and forestry.** Forestry Commission Bulletin no.70. 40 pp.
Includes information on the economic impact of the forest decline.

1499 Kerr, A., 1986. **Wasting the wealth: From sustained yield to spendthrift.** Forest Watch 7(5):25-28.
"Overcutting National Forests of the Pacific Northwest."

1500 MacDougall, A.K., 1987. The vanishing forests. Los Angeles Times, June 14, June 17, June 19, June 22, 1987.

1501 National Conference of State Legislatures, 1984. **Introduction to environmental conflict management: A legistative perspective.**

Boston, The Conference. 2 vols.

1502 Pollisco, F.S., 1986. **Imperatives to effective forest resource conservation.** Philippine Lumberman 32(4):16-19, 34.
Forest resource conservation in the Philippines.

1503 Porras Zuniga, A. and Villarreal Montoya, B., 1986. **[Deforestation in Costa Rica (social, economic, and legal implications).]** San Jose, Editorial Costa Rica. 118 pp.
In Spanish.

1504 Ramakrishnan, P.S., 1986. **A wet desert: Death of a rainforest.** Forest Planning Canada 2(5):19-20.
Desertification in Cherrapunji, India, "a contender for being the wettest spot on earth", due to overexploitation of land or improper land use.

1505 Rolston, H., III, 1986. **Beyond recreational value: The greater outdoors preservation-related and environmental benefits.** In: President's Commission on Americans Outdoors. A literature review. Values-pp.103-113.

1506 Rose, D.W., Ek, A.R., and Belli, K.L., 1987. **A conceptual framework for assessing impacts of carbon dioxide change on forest industries.** In: Shands, W.E. and Hoffman, J.S., eds. The greenhouse effect, climate change, and U.S. forests. pp.259-275.
"An analytical framework was developed for assessing possible impacts on forest industries of global warming.... Impacts on the aspen-based forest industry of the Great Lakes states and the loblolly pine-based forest industry of the southeastern United States were analyzed...." (p.259)

1507 Sandenburgh, R., Taylor, C., and Hoffman, J.S., 1987. **How forest products companies can respond to rising carbon dioxide and climate change.** In: Shands, W.E. and Hoffman, J.S., eds. The greenhouse effect, climate change, and U.S. forests. pp.247-257.

1508 Shands, W.E. and Hoffman, J.S., editors, 1987. **The greenhouse effect, climate change, and U.S. forests.** Washington, D.C., Conservation Foundation. 304 pp.
Selected papers are indexed in this issue.

1509 Solomon, A.M. and West, D.C., 1987. **Simulating forest ecosystem responses to expected climate change in eastern North America: Applications to decision making in the forest industry.** In: Shands, W.E. and Hoffman, J.S., eds. The greenhouse effect, climate change, and U.S. forests. pp.189-217.

1510 Wilcove, D.S., 1987. **Biological diversity in the national forests and below-cost timber sales.** In: LeMaster, D.C. et al., eds. Below-cost sales. pp.227-235.
The authors conclude that under certain circumstances timber harvesting, especially in the below-cost forests, may diminish biological diversity by reducing the amount of habitat and by

fragmenting natural ecosystems.

1511 Wilderness Society, 1987. **The wasting of the forests: A Wilderness Society report.** Washington, DC, Wilderness Society. 10 pp.
Undated; received in library, 1987. Describes what the Wilderness Society sees as the decline of the national forests and "outlines the steps the Society is taking to ensure protection of our public forestlands."

SOCIAL IMPACTS

1512 Beasley, J.L., 1982. **Social science in the Forest Service in the 1980's.** In: Voland, M.E. and Hester, W.H., eds. Social impact analysis in the Forest Service. pp.2-11.

1513 Cortner, H.J. and Hester, W.H., 1982. **Utilizing institutional analysis to enhance forest management.** In: Voland, M.E. and Hester, W.H., eds. Social impact analysis in the Forest Service. pp.86-89.

1514 Dietz, T., 1984. **Social impact assessment as a tool for rangeland management.** In: National Research Council. Developing strategies for rangeland management. pp.1613-1634.

1515 Giannettino, S., 1982. **Social science and forest planning.** In: Voland, M.E. and Hester, W.H., eds. Social impact analysis in the Forest Service. pp.26-28.

1516 Voland, M.E. and Hester, W.H., editors, 1982. **Social impact analysis in the Forest Service: A workshop summary.** U.S. Forest Service, Policy Analysis Staff. 92 pp.
Contains background papers from a workshop on "Social Impact Analysis in the Forest Service", held in Denver, Mar.2-3, 1982. Selected papers are indexed in this issue.

1517 Voland, M.E., Boland, M.J., Holden, A., and Rupp, C.W., 1982. **Challenges and opportunities for the Forest Service social scientist.** In: Voland, M.E. and Hester, W.H., eds. Social impact analysis in the Forest Service. pp.13-24.
A panel discussion. Presentations include: Boland, "National forests in North Carolina"; Holden, "What we know now that we didn't know then", and a talk by Rupp.

1518 Wenner, B., 1982. **Analyzing the social effects of minerals projects.** In: Voland, M.E. and Hester, W.H., eds. Social impact analysis in the Forest Service. pp.56-59.

1519 Williams, G.W., 1982. **The Umpqua connotes timber production: Variations in social impact assessment.** In: Voland, M.E. and Hester, W.H., eds. Social impact analysis in the Forest Service. pp.32-34.

The author is sociologist for the Umpqua National Forest in Western Oregon.

SOCIAL SCIENCES APPLIED TO FOREST MANAGEMENT

FOREST MANAGEMENT - GENERAL

1520 Barciok, H. and Schmidt, B., 1986. **[Establishment of norms for the costs of management and administration in the State Forest Enterprises through the use of multivariate statistical method.]** Beitrage fur die Forstwirtschaft 20:134-138.
In German with summaries in English, German, and Russian.

1521 Fontaine, R.G., 1986. **Management of humid tropical forests.** Unasylva 38(4,154):16-21.

1522 Leslie, A.J., 1987. **A second look at the economics of natural management systems in tropical mixed forests.** Unasylva 39(1,155):46-58.

1523 Sydow, H.von, 1987. **From NSR to intensive forest management.** University of Alberta, Faculty of Agriculture and Forestry, Forest Industry Lecture Series no.18. 23 pp.
A discussion of forest management in Sweden. NSR refers to forests that are non-sufficiently restocked.

MULTIPLE USE MANAGEMENT

1524 Alward, G.S., 1987. **Assessing the socioeconomic implications of multiple-use forestry.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.191-202.

1525 Behan, R.W., 1984. **Multiple use management: Kudos and caveats.** In: National Research Council. Developing strategies for rangeland management. pp.1991-2011.
The author states that the Bureau of Land Management has much to learn from the Forest Service experience with multiple use management.

1526 Bludovsky, Z., 1987. **Economic problems of Czechoslovak multiple use forestry.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.21-28.

1527 Bussche, G.H. von dem, 1983. **Are state plantations being fully used?** In: Proceedings of the Jubilee Symposia, 1982. University of Stellenbosch, Faculty of Forestry, Communication 98:393-412.
Multiple use of state forest lands in South Africa.

1528 Carlson, L.W. and Shea, K.R., compilers, 1986. **Increasing productivity of multipurpose lands: IUFRO Research Planning Workshop for Africa, Sahelian and North Sudanian Zones, Nairobi, Kenya, 9-15 January, 1986.** Hull, Canadian Forestry Service. 333 pp.

1529 Damnjanovic, S.S., 1987. **Policy development for multiple use forestry in Yugoslavia.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.1-11.

1530 Hof, J.G., 1987. **Uncertainty and response bias in contingent valuation of forest uses.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.181-190.

"This paper analyzes the effect of uncertainty on CVM responses in a theoretical model of respondent behavior." (p.181)

1531 Illyes, B. and Keresztesi, B., 1987. **New developments in the economic evaluation of the multiple-use of forestry in Eastern European countries.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.12-20.

1532 Kaiser, F. and Brown, P., compilers, 1987. **Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry.** Oregon State University, Dept. of Resource Recreation Management. 281 pp.

On title page: "International Union of Forestry Research Organizations Work Project 4.08.00 and S.6.01.00". Selected papers are indexed in this issue.

1533 Knopp, T.B., 1987. **A market simulation process for collective forest land-use decisions.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.157-169.

1534 Koch, N.E., 1987. **Multiple-use forestry in Denmark.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.37-46.

1535 Kohler, V., 1987. **Multipurpose forestry in South America from the viewpoint of evaluation.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.61-67.

1536 Leman, C.K., 1984. **Formal versus de facto systems of multiple use planning in the Bureau of Land Management: Integrating comprehensive and focused approaches.** In: National Research Council. Developing strategies for rangeland management. pp.1851-1890.

"This paper examines planning for current and future priorities on lands of the Bureau of Land Management. It evaluates recent experience with formal systems of multiple use planning and explores other forms of BLM planning, such as those implied by the budget process and those focusing on particular resources or geographic

areas." (p.1853)

1537 Lewis, C.E., 1986. **Integrated management of pines, pastures, and cattle in the southeastern United States.** In: Joss, P.J. et al., eds. Rangelands: A resource under siege. p.131.

1538 Moiseev, N.A., 1987. **System approach to multiple forest use management strategy for large areas.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.76-81.

1539 Murao, K., 1987. **On recent development of economic evaluation of multiple-use forestry in Japan.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.29-36.

1540 Peepre, J., 1987. **Conservation, outdoor recreation, and forest management in British Columbia.** In: Fulthorpe, R. and Buffinga, A., eds. Woodshock: The perception and use of forested land in Canada. pp.136-143. (JD)

1541 Reunala, A., 1987. **Forest benefits in Finland.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.47-60.
The author distinguishes the material from the "immaterial" benefits of forests. Included in the immaterial are: "archetypal, cultural, social and psychological benefits".

1542 Schweitzer, D.L., 1987. **Economic analysis in multiple-use planning for the national forests of the United States.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.150-156.
"In this paper, general requirements for analysis in forest planning in the United States are summarized." (p.151)

1543 Stratten, P.M., 1983. **Possibilities and problems of multiple land-use in forestry.** In: Proceedings of the Jubilee Symposia, 1982. University of Stellenbosch, Faculty of Forestry, Communication 98:371-392.
"The paper concludes that multiple land-use systems are very rewarding. A new and energetic research programme by a team of economists, foresters, agriculturists and nature conservationists is strongly recommended." (p.372)

1544 Tunystja, J.J., 1987. **Ecological economic problems of forest management development.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.170-180.

OWNERSHIP

PUBLIC LANDS

1545 Dyer, A.A., 1984. **Public natural resource management and valuation of nonmarket outputs.** In: National Research Council. Developing strategies for rangeland management. pp.1559-1596.

"Both legislative mandate and Departmental-OMB budget review policy suggests that the BLM will have to undertake rigorous economic efficiency analysis which includes consideration of nonmarket outputs... Review of literature on valuation of nonmarket goods supports a conclusion that the willingness-to-pay procedure is the most appropriate conceptual framework." (p.1593)

1546 Hays, S.P., 1984. **Public values and management response.** In: National Research Council. Developing strategies for rangeland management. pp.1811-1844.

Involves the BLM's response to the two types of users: New commodity users (energy and mineral companies) on the one hand, and environmental users on the other.

1547 U.S. Bureau of Land Management and U.S. Forest Service, 1986. **Legislative environmental impact statement for the Bureau of Land Management-Forest Service Interchange.** Washington, DC, Government Printing Office. 250 pp.

This legislative EIS assesses probable environmental consequences of a legislative action to transfer jurisdiction over certain federal lands and minerals between the Department of the Interior, BLM and the Department of Agriculture, Forest Service.

PRIVATE OWNERSHIP - GENERAL ASPECTS

1548 Cubbage, F.W. and Harris, T.G., Jr., 1986. **Tract size and forest-management practices: Issues, literature, and implications.** Georgia Agricultural Experiment Stations, Research Report 511. 29 pp.

"This paper examines... whether tract size is a limiting factor in the production of timber on public or private forestlands. Planting, management, harvesting, and marketing aspects are examined." (p.1)

1549 Curtis, D.S., 1987. **Woodlot owner organizations in eastern Canada: Historic development, legislation, structure, financing and services.** Canadian Forestry Service-Maritimes, Information Report M-X-162. 118 pp.

1550 McWilliams, W.H. and Frey, P.D., 1986. **Status of privately owned harvested timberland in Louisiana, 1974-84.** U.S. Forest Service, Research Note SO-329. 5 pp.

PRIVATE FORESTRY - INDUSTRIAL AND NONINDUSTRIAL

1551 Hill, D.B., 1985. **Small woodlot management in Kentucky.** University of Kentucky, Cooperative Extension Service, FOR-15. 23 pp.

1552 Marsh, P. de, 1987. **Small scale forest ownership and intensive forest management: The potential in New Brunswick.** In: Fulthorpe, R. and Buffinga, A., eds. Woodshock: The perception and use of forested land in Canada. pp.62-65.

"The focus of this paper is the strengths and weaknesses of private ownership of small blocks of forest land as these relate to efforts to intensify forest management and to the design of government incentive programs, in the New Brunswick context." (p.62) (JD)

1553 Rosson, J.F., Jr. and Doolittle, L., 1987. **Profiles of Midsouth nonindustrial private forests and owners.** U.S. Forest Service, Resource Bulletin SO-125. 39 pp.

1554 Williston, H.L., Balmer, W.E., and Sims, D.H., 1986. **Managing the family forest in the South.** U.S. Forest Service, Southern Region, Management Bulletin R8-MB1. 90 pp.

Includes chapters on site preparation, planting, thinning, harvesting, and protection, followed by chapters on multiple use, economics, and marketing.

LABOR CONSIDERATIONS - WORK STUDIES

1555 Kolenka, I., 1985. **[Prognosis of the development of labour productivity on the level of the state forest enterprises by econometric models.]** Acta Facultatis Forestalis Zvolen 27:239-248.

In Czech, with English, German, and Russian summaries.

1556 Saarilahti, M. and Ole-Meiludie, R.E.L., 1987. **Production rate and work strain on workers in cutting of pines in Tanzania.** Silva Fennica 21:95-106.

1557 Spyrka, B., 1985. **[Technical development in timber transport and need for labour in forestry.]** Acta Facultatis Forestalis Zvolen 27:249-258.

In Czech, with summaries in English, Russian, and German. Discusses the relationship between "the need for workers and technical equipment of labour in forest production." (p.249)

PROTECTION

1558 Billings, R.F., 1985. **Implementing forest pest management - the forester's role.** Louisiana State University, Annual Forestry Symposium. Proceedings 34:111-119.

1559 Chambers, J.W., 1987. **The evolution of wildland fire management and policy.** Fire Management Notes 48(2):5-8.
"The objectives of this paper are to provide background information on historical fire management in the United States and to describe the evolution of public wildland fire management policy, particularly in the Forest Service."

1560 Hofacker, T.H., Loomis, R.C., and Tucker, S.M., tech. coord., 1987. **Forest insect and disease conditions in the United States 1986.** U.S. Forest Service, Forest Pest Management. 94 pp.

1561 Huber, C.M., McClure, J.P., and Cost, N.D., 1987. **Incidence and impact of damage to Virginia's timber, 1986.** U.S. Forest Service, Resource Bulletin SE-90. 30 pp.
Percentage of damage incidence and volume loss to live trees are presented in tables by major timber species and damaging agent.

1562 Leuschner, W.A., 1987. **Effects of below-cost timber sales on forest protection.** In: LeMaster, D.C. et al., eds. Below-cost sales. pp.159-170.
"The likelihood of an economic impact on forest protection if BCS are eliminated is analyzed... Economic impacts are likely, but their likelihood varies by forest pest and impact category." (p.159)

1563 Loane, I.T. and Gould, J.S., 1986. **Aerial suppression of bushfires: Cost-benefit study for Victoria.** Canberra, CSIRO Division of Forest Research, National Bushfire Research Unit. 213 pp. + photos + 83 pp. appendices.

1564 Mills, W.L., Jr., Shnitzler, S.D., and Meldahl, R.S., 1987. **Measuring wildfire impacts: Method and case study.** Southern Journal of Applied Forestry 11:143-147.
"A discounted cash flow model called the Impact Appraisal Model(IAM) computes the economic impact due to a change in timber production caused by a wildfire." (abstract)

1565 Mistretta, P.A. and Bylin, C.V., 1987. **Incidence and impact of damage to Louisiana's timber, 1985.** U.S. Forest Service, Resource Bulletin SO-117. 19 pp.

1566 Myers, R.R. and Coleman, S.W., 1985. **Impact of insects and diseases on large industrial forest landowners.** Louisiana State University, Annual Forestry Symposium. Proceedings 34:8-15.
Discusses insect and disease threats based on their potential financial impacts.

1567 Nielsen, C. and Buchanan, T., 1986. **A comparison of the effectiveness of two interpretive programs regarding fire ecology and fire**

management. Journal of Interpretation 11:(1):1-10.
"Visitors' knowledge and attitudes toward National Park Service fire management policies were compared between participants in two different fire management interpretive programs and two control groups not exposed to interpretive programs." (p.1)

1568 Rawat, J.K., Belli, K.L., Smith, S.M., and Nautiyal, J.C., 1987. **A pest and timber management model: Jack pine budworm and jack pine.** Canadian Journal of Agricultural Economics 35:441-461.
"A simple illustrative mathematical model for integrating forest pest control decisions with timber management is developed for a hypothetical jack pine forest infested with jack pine budworm." (p.441)

1569 Smith, E.L. and Gonzalez-Caban, A., 1987. **Estimating cost of large-fire suppression for three Forest Service regions.** U.S. Forest Service, Research Note PSW-391. 5 pp.
The annual costs (1970-1981) attributable to large fire suppression were estimated in the Pacific Northwest Region, the Northern Region, and the Intermountain Region of the U.S. Forest Service.

1570 Stine, S.E., 1987. **User attitudes toward fire policy in wilderness areas.** Fire Management Notes 48(2):16-17.
Reports the results of a survey conducted in the fall of 1986 in three national forest wilderness areas: River of No Return, Selway-Bitterroot, and Bob Marshall, in Idaho and Montana.

1571 Thatcher, R.C., Mason, G.N., and Hertel, G.D., 1986. **Integrated pest management in Southern pine forests.** U.S. Department of Agriculture, Agriculture Handbook no.650. 38 pp.

PRODUCTION OF FOREST GOODS AND SERVICES

OUTDOOR RECREATION

1572 Alward, G.S., 1986. **Local and regional economic impacts of outdoor recreation development.** In: President's Commission on Americans Outdoors. A literature review. Values-pp.47-58.
"Interactions between recreation activities and economic consequences at the regional level are examined." (p.47)

1573 Bockstael, N.E., Strand, I.E., and Hanemann, W.M., 1987. **Time and the recreational demand model.** American Journal of Agricultural Economics 69:293-302.
"In this paper a theoretically consistent approach to including time costs in recreational demand models is developed." (p.293)

1574 Bosserman, P., 1986. **Work and leisure relationships: A review of the literature.** In: President's Commission on Americans Outdoors. A literature review. Demand-pp.9-15.

1575 Brown, T.L., 1986. **A reexamination of the public - private interface in outdoor recreation.** In: President's Commission on Americans Outdoors. A literature review. Others - pp.69-75.

1576 Burch, W.R., Jr., 1986. **Ties that bind - the social benefits of recreation provision.** In: President's Commission on Americans Outdoors. A literature review. Values-pp.81-91.

1577 Cable,T.T., Knudson, D.M., and Theobald, W.F., 1986. **The application of the theory of reasoned action to the evaluation of interpretation.** Journal of Interpretation 11(1):11-25.

"The purpose of this paper is to propose application of a theoretical framework for evaluating the effectiveness of interpretation." (pp.11-12)

1578 Cable, T.T., Knudson, D.M., Udd, E., and Stewart, D.J., 1987. **Attitude changes as a result of exposure to interpretive messages.** Journal of Park and Recreation Administration 5(1):47-60.

"The purpose of this research is to document changes in attitudes as a result of exposure to interpretive messages, thereby gaining insight into the benefits received by agencies that use interpretation as a management tool." The research was carried out at the Petawawa National Forestry Institute located near Chalk River, Ontario.

1579 Christensen, H.H., Williams, P.J., and Clark, R.N., 1987. **Values and choices in outdoor recreation by male and female campers in dispersed recreation areas.** U.S. Forest Service, Research Paper PNW-RP-377. 20 pp.

Men and women using dispersed roaded areas in the Pacific Northwest were surveyed. "Overall, men and women were more similar than different in their perceptions of management problems."

1580 Christensen, H.H., 1986. **Vandalism and depreciative behavior.** In: President's Commission on Americans Outdoors. A literature review. Management-pp.73-87.

1581 Clark, R.N., 1986. **Onsite interaction of recreation and other resource uses.** In: President's Commission on Americans Outdoors. A literature review. Management-pp.27-45.

1582 Colorado Division of Parks and Outdoor Recreation, 1985. **State recreational trails master plan, non-motorized.** Denver, Colorado Division of Parks and Outdoor Recreation. 29, 60, 27 pp.

1583 Conservation Foundation, 1987. **Urban parks: Are they successful or unrealistic?** In: Brower, D.J. and Carol, D.S., eds. Managing land use conflicts. pp.220-230.

1584 Daniels, S.E., 1987. **Marginal cost pricing and the efficient provision of public recreation.** Journal of Leisure Research 19(1):22-34.

"The objective of this paper is to improve the understanding of efficient recreational resource allocation, in particular, the recreation resource defined by U.S.D.A. Forest Service campgrounds....

Demand is derived through conventional travel cost techniques and supply is measured as the marginal agency cost of providing recreation." (p.23)

1585 Dearden, P. and Andressen, B., 1987. **Outdoor recreation in advertising: Changes in time, activities, and products.** Journal of Leisure Research 19(1):41-56.
"This study examines the use of outdoor recreation in advertising in two national news magazines from 1960 to 1984...." (p.41)

1586 Decker, D.J., Brown, T.L., Driver, B.L., and Brown, P.J., 1987. **Theoretical developments in assessing social values of wildlife: Toward a comprehensive understanding of wildlife recreation involvement.** In: Decker, D.J. and Goff, G.R., eds. Valuing wildlife. pp.76-95.
Proposes "a theoretical framework for the comprehensive examination of wildlife recreation involvement." (p.76)

1587 Donnelly, D.M. and Rosenthal, D.H., 1986. **RMTCM: An interactive computer program for estimating travel cost models.** In: Wiant, H.V., Jr. et al., eds. Forestry Microcomputer Software Symposium. pp.331-347.

1588 Driver, B.L. and Koch, N.E., 1987. **Cross-cultural trends in user fees charged at national outdoor recreation areas.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.230-249.
"This paper offers an introductory overview of recent cross-cultural trends in user fees charged for outdoor recreation opportunities provided by national... agencies in eleven countries - Australia, Canada, Denmark, Finland, Great Britain, Holland, New Zealand, Norway, Sweden, the United States, and West Germany." (p.230)

1589 Driver, B.L. and Brown, P.J., 1986. **Probable personal benefits of outdoor recreation.** In: President's Commission on Americans Outdoors. A literature review. Values-pp.63-70 + tables.
"This paper describes the state of the art for measuring the benefits individuals realize from using outdoor recreation opportunities." (p.63)

1590 Driver, B.L. and Peterson, G.L., 1986. **The values and benefits of outdoor recreation: An integrating overview.** In: President's Commission on Americans Outdoors. A literature review. Values-pp.1-9.
"This paper describes the context within which the 10 literature synthesis papers on outdoor recreation benefits were written. ...The general content of each of the 10 papers is summarized, and some general conclusions are drawn." (p.1)

1591 Driver, B.L., Brown, T.C., and Burch, W.R., Jr., 1987. **A call for more comprehensive and integrated evaluations of public amenity goods and services.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th World Congress for Economic Value Analysis of Multiple Use Forestry. pp.204-216.
"This paper is concerned with the identification, measurement,

and valuation of the benefits of resource use." (p.205) Those amenity goods and services provided from the public management of wilderness, wildlife, fishery, scenic, heritage, and general outdoor recreation resources are used as examples.

1592 Durst, P.B. and Ingram, C.D., 1987. **How well do developing countries promote nature-oriented tourism by mail?** Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.25. 18 pp.

1593 Durst, P.B., 1987. **Natural history and nature-oriented adventure travel for rural development and wildlands management: Diagnosis of research needs and project opportunities for the Philippines.** Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.11. 31 pp.

1594 Durst, P.B., 1987. **Natural history and nature-oriented adventure travel for rural development and wildlands management: Diagnosis of research needs and project opportunities for Thailand.** Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.12. 20 pp.+ app.

1595 Edginton, C.R. and Williams, J.G., 1986. **Changing management practices in urban recreation and parks.** In: President's Commission on Americans Outdoors. A literature review. Urban-pp.53-77.
"This paper presents a review of the literature related to management concepts as applied to urban parks and recreation systems in the United States." (p.53)

1596 Ewert, A., 1987. **Outdoor adventure recreation: A trend analysis.** Journal of Park and Recreation Administration 5(2):57-67.

1597 Gierlinski, T., 1986. **[Needs and possibilities of recreation in forests of Poland from the view-point of protection of the natural environment.]** Sylwan 130(8):41-47.
In Polish, with summaries in Russian and English.

1598 Godbey, G., 1986. **Some selected societal trends and their impact on recreation and leisure.** In: President's Commission on Americans Outdoors. A literature review. Demand - pp.1-8.

1599 Guldin, R.W. and Kroon, H.J., 1987. **Economic and social aspects of user fees.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.217-229.
"The objective of this paper is to review the alternative strategies available to public financiers for setting recreation user fees in a market economy." (p.218)

1600 Gunn, C.A., 1986. **Philosophical relationships: Conservation, leisure, recreation and tourism.** In: President's Commission on Americans Outdoors. A literature review. Tourism-pp.1-7.
A discussion of how these 4 "ideologies" conflict and overlap. Includes a review of the literature.

1601 Heywood, J.L., 1987. **Experience preferences of participants in different types of river recreation groups.** Journal of Leisure Research 19(1):1-12.

1602 Howard, D.R., 1986. **Issues related to the pricing of outdoor recreation opportunities.** In: President's Commission on Americans Outdoors. A literature review. Financing - pp.15-21 + 3 figures.
A review of literature regarding the extent and impact of charging a fee for admission to and/or use of recreation resources.

1603 Ingram, C.D. and Durst, P.B., 1987. **Marketing nature-oriented tourism for rural development and wildlands management in developing countries: A bibliography.** Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.26. 119 pp.
Primarily limited to materials published within the last 10 years.

1604 Ingram, C.D. and Durst, P.B., 1987. **Marketing nature-oriented tourism for rural development and wildlands management in developing countries: A bibliography.** U.S. Forest Service, General Technical Report SE-44. 54 pp.
Annotated bibliography that specifically links tourism marketing and wildlands management. Arrangement is by broad subject with author and geographic indexes.

1605 Jafari, J., 1986. **A systematic view of sociocultural dimensions of tourism.** In: President's Commission on Americans Outdoors. A literature review. Tourism-pp.33-50.
A discussion which "connects tourism to the megasystems from which tourists are generated, to which they arrive, and in each of which tourism is only a part." (p.33)

1606 Jubenville, A., 1987. **Nature-based tourism in Alaska: Integration of tourism and resource management.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.276-281.
"The thesis of this paper is that, in the state of Alaska, most of the tourism and public recreation is nature-based, usually concentrated at the natural attractors." (p.276)

1607 Kaplan, M., 1986. **The elderly and outdoor recreation.** In: President's Commission on Americans Outdoors. A literature review. Demand - pp.25-32.

1608 Karameris, A., 1987. **Relations between the demand of outdoor recreation and landscape.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.266-275.

1609 Karameris, A., 1987. **[The landscape as a determinant factor for recreational use.]** Forstwissenschaftiches Centralblatt 106:92-101.
In German, with English summary. "This study attempted to estimate the recreational use and landscape value of four visitor areas of the Nationalpark Berchtesgaden and to establish respective

interrelationships." (p.100)

1610 Kim, M. and Schecter, M., 1987. **Evaluating resource inputs to the production of tourist services: A suggested approach.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.250-255
The author's purpose "is to evaluate the contribution of natural areas to the production of the tourist industry's 'output', by means of assigning to these largely unpriced resources their (implicit) share of total output costs." (p.251)

1611 Laarman, J.G. and Durst, P.B., 1987. **Nature travel and tropical forests.** Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.23. 16 pp.
Nature travel to destinations in developing countries is becoming big business. The authors consider the question of whether nature travel leads to appropriate socioeconomic development and what are the growth prospects for such enterprises.

1612 Laarman, J.G., 1987. **Nature-oriented tourism in Costa Rica and Ecuador: Diagnosis of research needs and project opportunities.** Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.6. 18 pp.

1613 Lime, D.W., 1986. **River recreation and natural resource management: A focus on river running and boating.** In: President's Commission on Americans Outdoors. A literature review. Management-pp.137-150.

1614 McCool, S.F. and Frost, J.E., 1987. **Outdoor recreation participation in Montana: Trends and implications.** Montana Forest and Conservation Experiment Station, Research Paper no.1. 15 pp.

1615 McDonald, C.D., Noe, F.P., and Hammitt, W.E., 1987. **Expectations and recreation fees: A dilemma for recreation resource administrators.** Journal of Park and Recreation Administration 5(2):1-9.
Examines the issue of one impact of an expanded user fee program, that of the demand or expectation by visitors for additional programs, services, or facilities.

1616 McLaughlin, W.J. and Saunders, P.R., 1987. **Effects of below-cost timber sales on outdoor recreation and related tourism.** In: LeMaster, D.C. et al., eds. Below-cost sales. pp.179-194.
"The major conclusion is that timber sales programs can have positive and/or negative effects on recreation and tourism." (p.179)

1617 McLaughlin, W.J. and Harris, C.C., 1986. **Regional resource recreation planning.** In: President's Commission on Americans Outdoors. A literature review. Management-pp.105-119.
"This research review predominantly addresses regional and area level planning; it emphasizes public lands and changes in planning approaches and technology associated with the practice of resource-based recreation planning." (p.105)

1618 Mills, A.S., Um, S., McWilliams, E.G., and Hodgson, R.W., 1987. The

importance of random sampling when conducting visitor surveys. Journal of Park and Recreation Administration 5(2):47-56.

1619 Minnesota Department of Natural Resources, 1985. **Minnesota State Comprehensive Outdoor Recreation Plan 1984-1989.** Minnesota Dept. of Natural Resources, Office of Planning and Special Services. 2 vols.
Prepared with assistance from the Legislative Commission on Minnesota Resources and the National Park Service. Undated; printed 1987.

1620 Nugent, G. and Mawhinney, K., 1987. **Recreational hunters' views on fallow deer management in the Blue Mountains, Otago.** New Zealand Forestry 32(1):32-35.

1621 Peterson, G.L. and Brown, T.C., 1986. **The economic benefits of outdoor recreation.** In: President's Commission on Americans Outdoors. A literature review. Values-pp.11-18.

1622 Pigram, J., 1983. **Outdoor recreation and resource management.** London, Croom Helm; New York, St. Martin's Press.

1623 President's Commission on Americans Outdoors, 1986. **A literature review.** Washington, DC, Government Printing Office. Various pagings.
This is one of three appendices to the report of the President's Commission on Americans Outdoors. Literature on topics of interest to the Commission were reviewed by teams of researchers who submitted 76 papers synthesizing what they found. This volume contains all of those papers. Selected papers are indexed in this issue.

1624 President's Commission on Americans Outdoors, 1987. **Americans outdoors; the legacy, the challenge, with case studies.** Washington, DC, Island Press. 426 pp.
The report of the President's Commission.

1625 Robinson, J.P., 1986. **Time use and outdoor recreation.** In: President's Commission on Americans Outdoors. A literature review. Demand - pp.17-23 + tables.
Reports on time-diary studies, percentage of free time spent on recreation.

1626 Roggenbuck, J.W. and Ham, S.H., 1986. **Use of information and education in recreation management.** In: President's Commission on Americans Outdoors. A literature review. Management-pp.59-71.
The authors believe that there is "ample evidence that recreationists strongly support the use of information and education as a management tool and prefer it over direct regimentation of their behavior." (p.66)

1627 Schreyer, R., 1986. **Motivation for participation in outdoor recreation and barriers to their participation - a commentary on salient issues.** In: President's Commission on Americans Outdoors. A literature review. Motivations-pp.1-8.

1628 Schroeder, H.W. and Louviere, J.J., 1986. **A model for predicting**

distribution of recreational use over a system of parks. In: Wiant, H.V., Jr. et al, eds. Forestry Microcomputer Software Symposium. pp.623-631.

1629 Scott, R. and Gartner, W.C., 1987. **An economic feasibility analysis for concessionaire management of campgrounds on the Siuslaw National Forest.** Western Journal of Applied Forestry 2(3):91-94.
"The objectives of this paper are to identify which, if any, of the campgrounds on the Siuslaw National Forest might be suitable for concessionaire operation and to consider the impact concessionaire management might have on forest revenues and costs." (p.91)

1630 Shattuck, J.B., 1987. **Vandalism in public park facilities: A guide for park managers.** Columbus, Ohio, Publishing Horizons. 65 pp.

1631 Shaw, W.W., 1987. **The recreational benefits of wildlife to people.** In: Decker, D.J. and Goff, G.R., eds. Valuing wildlife. pp.208-213.
Addresses "the importance of wildlife as a focus for recreation in our culture and unique attributes of these activities." (p.208)

1632 Shelby, B., Whittaker, D., Speaker, R., and Starkey, E.E., 1987. **Social and ecological impacts of recreation use on the Deschutes River Scenic Waterway.** Oregon State University, College of Forestry, Dept. of Resource Recreation Management. 295 pp.
Report to the Oregon Legislature.

1633 Stankey, G.H. and Manning, R.E., 1986. **Carrying capacity of recreational settings.** In: President's Commission on Americans Outdoors. A literature review. Management-pp.47-57.
Determining how many people could use a given recreational setting before unacceptable impact sets in.

1634 Stokes, G.L., 1986. **Alternative methods for land protection, conservation and recreation access.** In: President's Commission on Americans Outdoors. A literature review. Management-pp.89-103.
This paper focuses on voluntary, non-regulatory approaches.

1635 Stoll, J.R., 1986. **Methods for measuring the net contribution of recreation to national economic development.** In: President's Commission on Americans Outdoors. A literature review. Values-pp.19-33.
Non-market valuation of recreation resources.

1636 Stynes, D.J., 1986. **Consumer information and recreation choice.** In: President's Commission on Americans Outdoors. A literature review. Information - pp.1-13.

1637 Stynes, D.J., 1986. **Recreation forecasting methods.** In: President's Commission on Americans Outdoors. A literature review. Demand-pp.33-49.

1638 Task Force on Recreation on Private Lands, 1986. **Recreation on private lands: Issues and opportunities.** A workshop sponsored by Senator Malcolm Wallop, American Forest Council, American Forestry Association, etc., Washington, DC, March 10, 1986. 67 pp.

On March 10, 1986 a consortium of interest groups sponsored a conference on the use of private lands for recreation in conjunction with the President's Commission on Americans Outdoors. This publication includes papers from the workshop.

1639 Tinsley, H.E.A., 1986. **Motivations to participate in recreation: Their identification and measurement.** In: President's Commission on Americans Outdoors. A literature review. Motivations-pp.9-14 + tables.

1640 U.S. General Accounting Office, 1987. **Parks and recreation maintenance costs and visitor days at two recreation areas.** U.S. General Accounting Office. 9 pp.
The two areas studied were Yellowstone National Park and Wasatch-Cache National Forest.

1641 Walsh, R.G. and Loomis, J.B., 1986. **The contribution of recreation to national economic development.** In: President's Commission on Americans Outdoors. A literature review. Values-pp.35-46 + tables.

1642 Warren, R., 1986. **Fees and charges.** In: President's Commission on Americans Outdoors. A literature review. Financing-pp.5-13.

1643 Washington State Interagency Committee for Outdoor Recreation, 1986. **Safety in parks and recreation (a bibliography).** Olympia, Interagency Committee for Outdoor Recreation. 15 pp.

1644 West, P.C., 1986. **Social benefits of outdoor recreation: Sociological perspectives and implications for planning and policy.** In: President's Commission on Americans Outdoors. A literature review. Values-pp.93-102 + 1 fig.

1645 Williams, D.R. and Jacobs, G.R., 1986. **Off-site resource development conflicts.** In: President's Commission on Americans Outdoors. A literature review. Management-pp.13-26.
"An off-site resource/development conflict with recreation land use is one in which recreation as a resource use comes into conflict with resource development priorities, allocations and uses of other public or private lands." (p.13)

1646 Williams, D.R., 1986. **Psychological perspectives on the environment-experience relationship: Implications for recreation resource management.** In: President's Commission on Americans Outdoors. A literature review. Motivations-pp.17-31.

1647 Wilman, E.A., 1987. **A simple repackaging model of recreational choices.** American Journal of Agricultural Economics 69:603-612.
"The purpose of this article is to use the simple repackaging model of Muellbauer, and Fisher and Schell to derive constant visit length demand curves from variable visit length travel cost demand curves." (p.603)

1648 Wilson, M.A. and Laarman, J.G., 1987. **Nature tourism and enterprise development in Ecuador.** Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.27. 22 pp.

1649 Wilson, M.A., 1987. **Nature-oriented tourism in Ecuador: Assessment of industry structure and development needs.** Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.20. 37 pp.

WILDERNESS MANAGEMENT-NATURE CONSERVATION-NATIONAL PARKS

1650 Badyda, E., 1986. **[Problems of nature protection in the regional administration of State Forests of Bialystok against the background of forest economy and specificity of North-East Poland.]** Sylwan 130(11):19-32.
In Polish, with English and Russian summaries.

1651 Brown, P.J., McCool, S.F., and Manfredo, M.J., 1987. **Evolving concepts and tools for recreation user management in wilderness: A state-of-knowledge review.** In: Lucas, R.C., comp. Proceedings - National Wilderness Research Conference ... 1985. pp.320-346.
"Strategies discussed include carrying capacity, recreation opportunity spectra, limits of acceptable change, and experience-based mangagement." (p.320)

1652 Callicott, J.B., 1987. **The scientific substance of the land ethic.** In: Tanner, T., ed. Aldo Leopold: The man and his legacy. pp.87-104.

1653 Cordell, H.K. and Watson, A.E., 1987. **A framework for wilderness assessment and research.** In: Lucas, R.C., comp. Proceedings - National Wilderness Research Conference...1985. pp.63-68
Describes the 1989 Renewable Resources Planning Act Assessment of Wilderness.

1654 Crandell, H., 1987. **Congressional perspectives on the origin of the Wilderness Act and its meaning today.** In: Lucas, R.C., comp. Proceedings - National Wilderness Research Conference... 1985. pp.9-14.
The author is former staff director, House Public Lands Subcommittee.

1655 Dasmann, R.F., 1987. **The land ethic and the world scene.** In: Tanner, T., ed. Aldo Leopold: The man and his legacy. pp.107-114.

1656 Driver, B.L., Nash, R., and Haas, G., 1987. **Wilderness benefits: A state-of-knowledge review.** In: Lucas, R.C., comp. Proceedings - National Wilderness Research Conference... 1985. pp.294-319.
"Describes need for more objective information on wilderness benefits, especially as a base for formulating a sounder wilderness philosophy... classifies benefits as personal, social, and intrinsic." (p.294)

1657 Eidsvik, H.K., 1987. **Wilderness policy - an international perspective.** In: Lucas, R.C., comp. Proceedings - National Wilderness Research Conference... 1985. pp.54-58.
"This paper explores wilderness from a global point of view, using the United States only as a point of reference." (p.54)

1658 Getches, D.H., 1987. **Wilderness values and challenges: A Colorado perspective.** In: Lucas, R.C., comp. Proceedings - National Wilderness Research Conference...1985. pp.5-8.

1659 Harmon, D., 1987. **Cultural diversity, human subsistence, and the national park ideal.** Environmental Ethics 9:147-158.

1660 Henning, D.H., 1987. **Wilderness politics: Public participation and values.** Environmental Management 11:283-293.

1661 Lucas, R.C. and Krumpe, E.E., 1986. **Wilderness management.** In: President's Commission on Americans Outdoors. A literature review. Management-pp.121-135.

1662 Lucas, R.C., 1987. **Perspectives on the history of wilderness research.** In: Lucas, R.C., comp. Proceedings - National Wilderness Research Conference... 1985. pp.15-28.

1663 Lucas, R.C., compiler, 1987. **Proceedings - National Wilderness Research Conference: Issues, state-of-knowledge, future directions, Fort Collins, CO, July 23-26, 1985.** U.S. Forest Service, General Technical Report INT-220. 369 pp.
"Includes 35 reports giving perspectives on wilderness values, management, and research; states of knowledge for wilderness resource research; states of knowledge for wilderness user research; and future directions for wilderness research." (abstract) Selected papers are indexed in this issue.

1664 Roggenbuck, J.W. and Lucas, R.C., 1987. **Wilderness use and user characteristics: A state-of-knowledge review.** In: Lucas, R.C., comp. Proceedings - National Wilderness Research Conference... 1985. pp.204-245.
"The scope of this paper is limited to research focusing on methods for collecting wilderness use and user data, basic demographic descriptions of wilderness visitors, characteristics of wilderness visits, trends and projections of use and users, and needs for additional use information." (p.205)

1665 Sokolowski, A.W., 1986. **[The role of national parks and reservations in the development of forest sciences.]** Sylwan 130(11):33-39.
In Polish, with summaries in English and Russian.

1666 Stankey, G.H. and Schreyer, R., 1987. **Attitudes toward wilderness and factors affecting visitor behavior: A state-of-knowledge review.** In: Lucas, R.C., comp. Proceedings - National Wilderness Research Conference... 1985. pp.246-293.
"This review outlines historical and current societal and individual attitudes toward wilderness, reasons for participating in wilderness, factors affecting wilderness behavior (including attitudes toward management, crowding, and conflict), and how information and education affect behavior." (p.246)

1667 Stankey, G.H., 1987. **Scientific issues in the definition of wilderness.** In: Lucas, R.C., comp. Proceedings - National

Wilderness Research Conference... 1985. pp.47-53.

1668 Szczesny, T., 1986. [State and prospects of nature protection in Poland.] Sylwan 130(11):1-17.
In Polish, with summaries in English and Russian. Includes a discussion of the administration of national parks in Poland.

1669 U.S. General Accounting Office, 1987. **Federal land management; nonfederal land and mineral rights could impact future wilderness areas.** U.S. General Accounting Office, GAO RCED-87-131. 98 pp.

1670 University of Idaho, Wilderness Research Center, 1985. **Wilderness management - a five-year action program.** University of Idaho, Wilderness Research Center. Unpaged.
Recommendations of a national steering committee composed of representatives from federal land management agencies (U.S. Forest Service, BLM, National Park Service, Fish and Wildlife Service) and representatives of user groups (Wilderness Society, Appalachian Mountain Club, etc.) Undated; probable date, 1985.

RANGE MANAGEMENT

1671 Artz, N.E. et al., 1986. **Social inputs in range development planning.** In: Joss, P.J. et al., eds. Rangelands: A resource under siege. pp.357-361.
Co-authors are J.T. O'Rourke, J.L. Gilles, R.S. Aro, and Narjisse.

1672 Baden, J., 1984. **Range resources and institutional change.** In: National Research Council. Developing strategies for rangeland management. pp.1681-1688.

1673 Burdge, R.J., 1984. **Getting and staying in touch: Sociological techniques for evaluation of range management decision alternatives.** In: National Research Council. Developing strategies for rangeland management. pp.1635-1658.
This paper deals with "approaches to obtaining public input to the evaluation of resource management alternatives." (p.1655)

1674 Defosse, G.E. and Robberecht, R., 1987. **Patagonia: Range management at the end of the world.** Rangelands 9:106-109.
Range management in the Patagonian region of the Argentine Republic.

1675 Fairfax, S.K., 1984. **Coming of age in the Bureau of Land Management: Range management in search of a gospel.** In: National Research Council. Developing strategies for rangeland management. pp.1715-1766.

1676 Fairfax, S.K., 1984. **Legal and political aspects of range management: Summary and recommendations.** In: National Research Council. Developing strategies for rangeland management. pp.1689-1714.

1677 Gardner, B.D., 1984. **The role of economic analysis in public range**

management. In: National Research Council. Developing strategies for rangeland management. pp.1441-1466.
The author discusses some of the more significant management issues faced by the BLM: Land use planning, multiple use philosophy, grazing fees, and range improvement analysis.

1678 Godfrey, E.B., 1984. **Measuring the economic impact of agency programs on users and local communitites.** In: National Research Council. Developing strategies for rangeland management. pp.1517-1548.

1679 Gray, A., Fagouri, M., and Nolte, D., 1986. **For a better tomorrow - the story of range management in Morocco.** In: Joss, P.J. et al., eds. Rangelands: A resource under siege. pp.361-362.

1680 Hrabovszky, J.P., Gartner, J., and Riveros, F., 1986. **Changes in the role of rangelands in the land use systems of developing countries.** In: Joss, P.J. et al., eds. Rangelands: A resource under siege. pp.103-106.

1681 Joss, P.J., Lynch, P.W., and Williams, O.B., editors, 1986. **Rangelands: A resource under seige. Proceedings of the Second International Rangeland Congress, Adelaide, Australia, 1984.** Canberra, Australian Academy of Science. 634 pp.
Selected papers are indexed in this issue.

1682 Kerr, I.G.C., 1986. **Land use policy v. property rights: A New Zealand example.** In: Joss, P.J. et al., eds. Rangelands: A resource under siege. pp.121-123.

1683 Lambert, D.K., 1987. **Ranch values and the federal grazing fee.** Journal of Range Management 40:397-400.
A review of the literature addressing rural land valuation approaches followed by a discussion of the impact of higher federal grazing fees on ranch values.

1684 Marsile, A., 1986. **Private industry in Morocco - range management hits the marketplace.** In: Joss, P.J. et al., eds. Rangelands: A resource under siege. pp.364-365.
"This paper describes the evolution and responsibilities of governmental, quasi-governmental, and private organizations in Morocco which are attempting to further the cause of range resource management." (p.364)

1685 Martin, W.E., 1984. **Mitigating the economic impacts of agency programs for public rangelands.** In: National Research Council. Developing strategies for rangeland management. pp.1659-1679.

1686 National Research Council, 1984. **Developing strategies for rangeland management.** Boulder, Westview Press. 2022 pp.
A report prepared by the Committee on Developing Strategies for Rangeland Management, National Research Council/National Academy of Sciences; B. Delworth Gardner, chairman. Selected papers are indexed in this issue.

1687 Nielsen, D.B., 1984. **Economic factors to be considered in sagebrush/grassland management.** In: National Research Council. Developing strategies for rangeland management. pp.1373-1386.

1688 Pope, C.A., III and Wagstaff, F.J., 1987. **Economics of the Oak Creek Range Management Project.** Journal of Environmental Management 25:157-165.

The Oak Creek Range Management Project of Central Utah "was established, in part, to provide information about the overall cost effectiveness of current range improvement practices on rangeland within pinyon-juniper ecosystems." (p.157)

1689 Sandford, S., 1986. **Traditional African range management systems.** In: Joss, P.J. et al., eds. Rangelands: A resource under siege. pp.475-478.

1690 Seligman, N.G. and Spharim, I., 1986. **Socio-economic feasibility of development in pastoral systems: A quantitative approach.** In: Joss, P.J. et al., eds. Rangelands: A resource under siege. pp.497-498.

1691 U.S. Forest Service, 1987. **Grazing statistical summary FY 1986.** U.S. Forest Service. 94 pp.

1692 Wagstaff, F.J. and Pope, C.A., III, 1987. **Finding the appropriate forage value for analyzing the feasibility of public range improvements.** U.S. Forest Service, Research Paper INT-378. 4 pp.

Briefly discusses the most common approaches to valuing livestock grazing on public lands.

1693 West, P.C., 1984. **Power, dependency, and conflict management: Implications for adaptive strategies in BLM management.** In: National Research Council. Developing strategies for rangeland management. pp.1777-1783.

A review of S.K. Faifax's paper "Coming of age in the Bureau of Land Management."

1694 Wilson, P.N., Ray, D.E., and Ruyle, G.B., 1987. **A method for assessing investments in intensive grazing technology.** Journal of Range Management 40:401-404.

An economic analysis of intensive grazing management.

1695 Workman, J.P., Fairfax, S.K., and Burch, W., 1984. **Applying socioeconomic techniques to range management decision making: Summary and recommendations.** In: National Research Council. Developing strategies for rangeland management. pp.1427-1440.

URBAN FORESTRY

1696 Brown, C.N. and Perschel, R.T., Jr., 1986. **Stewardship of community rivers: The urban forester's view.** In: National Urban Forestry Conference, 3rd. Proceedings. pp.236-238.

1697 Dwyer, J.F., 1987. **Estimating the demand for urban forest recreation sites.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.256-265.

1698 Dwyer, J.F., Jr., 1986. **How to make research and researchers work more effectively for you.** In: National Urban Forestry Conference, 3rd, Proceedings. pp.122-129.
A sustained flow of research information is essential for effective urban forest management.

1699 Haggard, R.T. and Modee, R.E., 1986. **Wildland urban interface: Challenge or crisis?** In: National Urban Forestry Conference, 3rd, Proceedings. pp.165-171.

1700 Haque, F., 1987. **Urban forestry: 13 city profiles.** Unasylva 39(1,155):14-25.

1701 Hayashi, S., and Emoto, Y., 1986. **Studies on optimal land use planning of suburban forest areas (II) No.2. Agriculture and forestry in suburban areas.** Research Bulletin of the Faculty of Agriculture, Gifu University 51:111-136.
In Japanese with English summary.

1702 Hayashi, S., and Emoto, Y., 1986. **Studies on optimal land use planning of suburban forest areas (II) No.1. Extension of urban areas and changes of land use in suburban forest areas.** Research Bulletin of the Faculty of Agriculture, Gifu University 51:91-109.
In Japanese with English summary.

1703 Hoefer, P.J., 1986. **Recipe for an urban forestry program.** In: National Urban Forestry Conference, 3rd. Proceedings. pp.198-201.

1704 Hudson, B., 1987. **The consulting arborist versus the urban forester.** Arbor Age 7(8):31-32.
Explores the effects that the dissension between the consulting arborist and the urban forester has on technical assistance and research funding.

1705 Kielbaso, J.J. and Beauchamp, B., 1986. **Urban tree management in the United States - 1986.** In: National Urban Forestry Conference, 3rd. Proceedings. pp.62-64.

1706 Lyons, J.R., 1986. **Congress and urban forestry.** In: National Urban Forestry Conference, 3rd, Proceedings. pp.265-266.
"The federal urban forestry program administered by the USDA Forest Service provides financial and technical assistance to states for implementation of their urban forestry programs." (p.265)

1707 Miller, R.W. and Marano, M.S., 1986. **Urban forest: A street tree management simulation.** In: Wiant, H.V., Jr. et al., eds. Forestry Microcomputer Software Symposium. pp.659-671.

1708 Moll, G. and Gangloff, D., 1987. **Urban forestry in the United States.** Unasylva 39(1,155):36-45.

1709 National Urban Forestry Conference, 3rd, Orlando, FL, 1986. **Proceedings: Urban forestry for livable cities: Making dollars and sense.** Washington, DC, American Forestry Association. 271 pp. + app.
Selected papers are indexed in this issue.

1710 Nighswonger, J., 1986. **Small city tree inventories.** In: National Urban Forestry Conference, 3rd. Proceedings. pp.89-90.

1711 Olembo, R.J. and Rham, P. de, 1987. **Urban forestry in two different worlds.** Unasylva 39(1,155):26-35.
A comparison of urban forestry in developed countries and in the Third World.

1712 Schroeder, H.W., 1987. **Psychological value of urban trees: Measurement, meaning, and imagination.** Wisconsin Arborist 6(4):6-7.

1713 Schroeder, H.W., 1986. **Psychological value of urban trees: Measurement, meaning, and imagination.** In: National Urban Forestry Conference, 3rd. Proceedings. pp.55-60.

1714 Schwabe, J., 1982. **Urban forest social assessment.** In: Voland, M.E. and Hester, W.H., eds. Social impact analysis in the Forest Service. pp.29-31.
Urban forest social impact analysis. The economic effects of the urban forest usually are minimal but the social impacts are often great.

1715 Skiera, R.W., 1986. **An urban forester's forest.** In: National Urban Forestry Conference, 3rd. Proceedings. pp.4-9.
Urban forestry program in Milwaukee, Wis.

1716 Sudol, F.J. and Zach, A.L., 1987. **City establishes urban tree management program.** Arbor Age 7(6):12-16.
Urban forestry in Newark, NJ.

1717 Thaman, R.R., 1987. **Urban agroforestry: The Pacific islands and beyond.** Unasylva 39 (1,155):2-13.
"The urban agroforestry is here defined as the planting, protection or preservation of trees for their economic, social and ecological value as part of agricultural and horticultural systems in urban areas, not only adjacent to houses and other buildings but also on undeveloped land within urban areas." (p.2)

1718 Willeke, D., 1987. **The imperative forest.** American Forests 93(7&8):61-64.
The author believes that "the Urban Forest is truly the Imperative Forest - a forest mandated and impelled primarily by philosophical considerations." (p.62)

1719 Willeke, D.C., 1986. **The urban forest: The imperative forest.** In: National Urban Forestry Conference, 3rd. Proceedings. pp.10-19.
The philosophy of the urban forest.

WATERSHED MANAGEMENT

1720 Cubbage, F.W., 1987. **Costs of forest water quality protection.** In: Proceedings, Forestry and Water Quality: A Strategy and Policy Workshop for State Foresters, Oklahoma City, July 6-9, 1987. Washington, D.C., National Association of State Foresters. 15 pp.

WILDLIFE AND FISH

1721 Brown, P.J. and Manfredo, M.J., 1987. **Social values defined.** In: Decker, D.J. and Goff, G.R., eds. Valuing wildlife. pp.12-23.
Attempts to "identify and define the social values of wildlife among the many kinds and views of value." (p.12)

1722 Callicott, J.B., 1987. **The philosophical value of wildlife.** In: Decker, D.J. and Goff, G.R., eds. Valuing wildlife. pp.214-221.

1723 Carrier, W.D., 1985. **Planning and managing for the spotted owl in the National Forests, Pacific Southwest Region.** In: Ecology and Management of the Spotted Owl in the Pacific Northwest. U.S. Forest Service, General Technical Report PNW-185:2-4.

1724 Decker, D.J. and Goff, G.R., editors, 1987. **Valuing wildlife: Economic and social perspectives.** Boulder, Westview Press. 424 pp.
Proceedings of a Wildlife Society symposium, "Economic and Social Values of the Wildlife Resource." Papers discuss "methods of determining the economic and social values of wildlife, the applications for environmental impact assessment and mitigation concepts in wildlife valuation, and stategies in wildlife planning and policy."

1725 Gullion, G.W., 1986. **Northern forest management for wildlife.** University of Alberta, Forest Industry Lecture Series no.17. 29 pp.

1726 Guynn, D.E. and Steinbach, D.W., 1987. **Wildlife values in Texas.** In: Decker, D.J. and Goff, G.R., eds. Valuing wildlife. pp.117-124.

1727 Kellert, S.R., 1987. **The contributions of wildlife to human quality of life.** In: Decker, D.J. and Goff, G.R., eds. Valuing wildlife. pp.222-229.

1728 King, D.A., Bugarsky, D.J., and Shaw, W.W., 1987. **Contingent valuation: An application to wildlife.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic

Value Analysis of Multiple Use Forestry. pp.125-136.
A study relating to a herd of desert bighorn sheep in the Pusch Ridge Wilderness Area near Tucson, Arizona. The objectives of the research were to 1) estimate the value of the herd to the residents of Tucson, and 2) "to estimate the effects of socioeconomic and other preference-related variables on the herd's value."

1729 Lee, P.L., 1985. **History and current status of spotted owl (Strix occidentalis) habitat management in the Pacific Northwest Region, USDA, Forest Service.** In: Ecology and Management of the Spotted Owl in the Pacific Northwest. U.S. Forest Service, General Technical Report PNW-185:5-9.

1730 Lyons, J.R., 1987. **Basic and applied social research needs in wildlife management.** In: Decker, D.J. and Goff, G.R., eds. Valuing Wildlife. pp.285-295.

1731 Lyons, J.R., 1987. **The effects of below-cost timber sales on fish and wildlife on the national forests.** In: LeMaster, D.C. et al., eds. Below-cost sales. pp.203-217.

1732 Marion, W.R., 1986. **Developing an urban wildlife program.** In: National Urban Forestry Conference, 3rd. Proceedings. pp.232-235.

1733 McDivitt, J.H., 1987. **Price and value alternatives for wildlife.** In: Decker, D.J. and Goff, G.R., eds. Valuing wildlife. pp.101-108.
A discussion of "alternative perspectives on wildlife values and their impact on economic evaluations of wildlife management." (p.102)

1734 Moen, A.N., 1984. **Deer management at the Crane Memorial Reservation and Wildlife Refuge.** Lansing, N.Y., CornerBrook Press. 89 pp.
"A case study in conflict resolution and decision-making..."

1735 Nyberg, J.B., Bunnell, F.L., Janz, D.W., and Ellis, R.M., 1986. **Managing young forests as black-tailed deer winter ranges.** British Columbia, Ministry of Forests, Land Management Report no.37. 49 pp.

1736 Rolston, H., III., 1987. **Beauty and the beast: Aesthetic experience of wildlife.** In: Decker, D.J. and Goff, G.R., eds. Valuing wildlife. pp.187-196.

1737 Shelton, R., 1987. **Fee hunting systems and important factors in wildlife commercialization on private lands.** In: Decker, D.J. and Goff, G.R., eds. Valuing wildlife. pp.109-116.
Discusses the three types of fee hunting systems used in the South: permit, leasing, and commercial membership enterprises.

1738 Svoboda, F.J., 1987. **Wildlife habitat management on private lands: A questionnaire survey of Minnesota private landowners.** Master's thesis, University of Minnesota. 353 pp. + app.

WOOD PRODUCTION

1739 Blyth, J.E. and Smith, W.B., 1987. **Pulpwood production in the Lake States by county, 1986.** U.S. Forest Service, Research Note NC-342. [4] pp.

1740 Dissmeyer, G.E., 1986. **Economic impacts of erosion control in forests.** In: Carpenter, S.B., ed. Proceedings: Southern Forestry Symposium... 1985. pp.262-287.

"Translating erosion to timber volume to present net value is a fundamentally sound strategy for selling landowners the concept that erosion control is to their economic benefit." (p.284)

1741 Dolan, A.G. and Russell, B.P., 1987. **Economic survey of private forestry: England and Wales establishment costs: 33rd annual report for the forest year 1985.** University of Oxford, Oxford Forestry Institute, Economics Section. 31 pp.

Includes cost figures for preparation of ground, fencing, planting, weeding, etc.

1742 Graaf, N.R. de, 1986. **Natural regeneration of tropical rain forest in Suriname as a land-use option.** Netherlands Journal of Agricultural Science 35:71-74.

"The need for management of tropical rain forest in Suriname, and possibilities of a polycyclic system in natural forest are discussed. The system, essentially a controlled harvesting followed by silvicultural treatments, probably will be a more sustainable and better land-use than shifting cultivation or plantation forestry, and will create permanent jobs and produce an export product."(p.71)

1743 Hinssen, P.J.W. and DeWit, A.P.W., 1986. **Micro-economic aspects of short rotation forestry in the Netherlands.** In: Sourie, J.C. and Killen, L., editors. Biomass: Recent economic studies. pp.11-17.

Two types of short rotation systems are discussed: "Rotation systems of less than 10 years with intensively managed poplar and willow cultures," and "rotation systems from 10-20 years with both mono poplar cultures and agroforestry cultures (combination of poplar with maize crop)." (p.11)

1744 Holten-Andersen, P., 1987. **Economic evaluation of cyclic regimes in beech (Fagus sylvatica L.).** Scandinavian Journal of Forest Research 2:215-225.

"A general model for comparing the profitabiltiy of natural regeneration in beech... with planting of Norway spruce... is developed." (p.215)

1745 Larson, L.K., 1986. **The best investment in forestry - managing natural stands.** In: Carpenter, S.B., ed. Proceedings: Southern Forestry Symposium... 1985. pp.84-91.

1746 Lohmander, P. and Helles, F., 1986. **Windthrow probability as a function of stand characteristics and shelter.** Sveriges Lantbruksuniversitet, Institutionen for Skogsekonomi, Arbetsrapport 53. 27 pp.

"Windthrow has a significant impact on the profitability of forestry."

1747 Lohmander, P. and Helles, F., 1987. **Windthrow probability as a function of stand characteristics and shelter.** Scandinavian Journal of Forest Research 2:227-238.

1748 Nevel, R.L., Jr. and Wharton, E.H., 1987. **Veneer log production and receipts in the Northeast, 1984 - a periodic assessment of regional timber output.** U.S. Forest Service, NE-RB-98. 17 pp.

1749 Noweg, T.A. and Kurtz, W.B., 1987. **Eastern black walnut plantations: An economically viable option for Conservation Reserve lands within the Corn Belt.** Northern Journal of Applied Forestry 4:158-160.
The authors describe the potential economic returns to black walnut management in the study region which comprises Illinois, Indiana, Iowa, Missouri and Ohio.

1750 Requillart, V. and Sourie, J.C., 1986. **Economic analysis of short rotation forestry with the help of two models, a static one and a dynamic one.** In: Sourie, J.C., and Killen, L., editors. Biomass: Recent economic studies. pp.43-54.

1751 Row, C., 1987. **Using costs and values in forest vegetation management analyses.** In: Walstad, J.D. and Kuch, P.J., eds. Forest vegetation management for conifer production. New York, Wiley. pp.327-364.
"This chapter discusses the cost components that managers should consider, the current cost ranges for vegetation management treatments, recent cost trends, the influence of project-related factors on unit costs, and procedures that can be used to estimate costs for budgeting purposes. It also describes the historical trends in timber values...." (p.327)

1752 Ruffler, R., 1986. **[Differentiation of costs from the establishment of a stand.]** Beitrage fur die Forstwirtschaft 20:129-131.
In German with English, German, and Russian summaries.

1753 Sourie, J.C., and Killen, L., editors, 1986. **Biomass: Recent economic studies.** New York, Elsevier. 187 pp.
A seminar in the CEC Research Programme on Energy in Agriculture, held in Brussels, Belgium, 10-11 October, 1985. Selected papers are indexed in this issue.

1754 Sprinz, P.T. and Burkhart, H.E., 1986. **Economic assessment of vegetation management in loblolly pine plantations.** In: Wiant, H.V., Jr. et al., eds. Forestry Microcomputer Software Symposium. pp.306-315.
ECONHDWD is a computer model that can be used to predict the biological and economical consequences of vegetative management in unthinned loblolly pine plantations.

1755 Straka, T.J. and Hotvedt, J.E., 1986. **Economic feasibility of thinning southern pine plantations.** In: Campbell, S.B., ed. Proceedings: Southern Forestry Symposium... 1985. pp.92-95.

1756 Thomson, T.A., Lester, D.T., and Martin, J.A., 1987. **Marginal analysis and cost effectiveness in seed orchard management.** Canadian Journal of Forest Research 17:510-515.
Uses "economic analysis to help choose prescriptions for management of seed orchards." (p.510)

1757 Widmann, R.H., 1987. **Pulpwood production in the Northeast - 1985.** U.S. Forest Service, NE-RB-99. 26 pp.

1758 Zobel, B.J., Wyk, G. van, and Stahl, P., 1987. **Growing exotic forests.** New York, John Wiley & Sons. 508 pp.
Includes some material on economic aspects of growing exotic forests, and a section on political problems related to growing exotics.

TIMBER HARVESTING

1759 Dennis, D.F. and Remington, S.B., 1987. **Trends in harvest cost in New Hampshire: 1964 to 1983.** U.S. Forest Service, NE-RN-335. 2 pp.
Timber harvesting costs for New Hampshire from 1964 to 1983 were examined.

1760 Greber, B.J., 1986. **Managing with harvest scheduling systems.** In: Carpenter, S.B., ed. Proceedings: Southern Forestry Symposium... 1985. pp.146-152.

1761 Hazenstab, R.A., Bowyer, J.L., Bradley, D.P., and Hoganson, H.M., 1987. **An assessment of productivity and harvesting costs for various forest harvest systems.** In: Bradley, D.P. and Lothner, D.C., comp. Achieving wood energy potentials. pp.54-66.
The authors reviewed literature dealing with available small log harvest systems and compiled production and cost data for eight selected harvest systems.

1762 Izlar, B., 1986. **Social regulations influencing forest harvesting.** In: Carpenter, S.B., ed. Proceedings: Southern Forestry Symposium... 1985. pp.96-101.

1763 Johnson, L.R. and Lee, H.W., 1986. **Firewood production from logging residue: A cost assessment.** In: Improving productivity through forest engineering: Proceedings of the Council on Forest Engineering, 9th annual meeting. Sponsored by American Pulpwood Association, and others. pp.73-79.

1764 Klocek, A. and Plotkowski, L., 1986. **[Problems of economic decisions in thinning.]** Sylwan 130(8):11-20.
In Polish, with summaries in Russian and English.

1765 Lambert, M.B., 1986. **Optimizing productivity, costs, and products through complete harvest planning.** In: Improving productivity through forest engineering: Proceedings of the Council on Forest Engineering, 9th annual meeting. Sponsored by American Pulpwood

Association, and others. pp.48-53.
"This paper presents methodology for analyzing... the aggregate logging activities that comprise a total harvest so that the operation is economical and efficient." (p.48)

1766 McCurdy, D.R. and Ewers, J.T., 1987. **Logging costs in Illinois, 1986.** National Woodlands 10(5):17-18.

1767 McWilliams, W.H. and Skove, D.J., 1987. **Status of privately owned harvested timberland in East Texas, 1975-1986.** U.S. Forest Service, Research Note SO-338. 6 pp.
Reports on harvesting practices and the success of pine regeneration following harvest.

1768 Zundel, P., 1986. **The economics of integrated full-tree harvesting and central processing in jack pine.** Final report. Forest Engineering Research Institute of Canada, Special Report SR-37; ENFOR Project P-322. 82 pp.
"This report presents the results of an analysis examining the economic worth associated with investing in forest harvesting systems designed to recover energy biomass in conjunction with conventional products such as tree lengths or logs." (p.ix)

TIMBER SUPPLY

1769 Bankes, T.G.H., 1984. **The planning and control of wood flow following a disaster.** Appita 37:637-640.

1770 Bliss, J.C. and Grassl, M.J., 1987. **Predicting timber harvests on private forests in southwest Wisconsin.** Northern Journal of Applied Forestry 4:152-154.

1771 Castonguay, T.L., 1986. **Timber volume in Illinois, 1985.** U.S. Forest Service, Research Note NC-339. 6 pp.

1772 Dutrow, G.F., 1987. **Effects of below-cost sales on private forestry investments and future timber supplies.** In: LeMaster, D.C. et al., eds. Below-cost sales. pp.121-126.

1773 Ek, A.R., Hoganson, H.M., and Hahn, J.T., 1987. **Predicting multiproduct timber yield for long-term supply analyses.** In: Bradley, D.P. and Lothner, D.C., comp. Achieving wood energy potentials. pp.9-20.

1774 Hoganson, H.M., 1987. **Impacts of wood energy use on timber supply in northeastern Minnesota.** In: Bradley, D.P. and Lothner, D.C., comp. Achieving wood energy potentials. pp.21-53.
"The objective of this study was to examine the economic timber supply situation in northeastern Minnesota to gain a better understanding of the opportunities for increased wood energy production." (p.22)

1775 Hultkrantz, L., 1987. **Deregulation of the rural land market - a way to increase forest harvesting in Sweden?** Sveriges Lantbruksuniversitet, Institutionen for Skogsekonomi, Arbetsrapport 65. 29 pp.

1776 Lofgren, K.G., 1986. **Effects of permanent and non-permanent forest policy means on timber supply.** In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:308-311.

1777 Marshall, P.L., 1987. **Sources of uncertainty in timber supply projections.** Forestry Chronicle 63(3):165-168.
"This paper examines some of the sources connected with the modelling of timber supply and the environment within which timber supply projections are applied." (p.165)

1778 Millard, I.B., 1984. **Planning the cut in South Australian radiata pine forests.** Appita 37:729-732.

1779 Pearse, P., 1987. **The tenure system's main faults: Lack of competition, over-allocation of timber.** Forest Planning Canada 3(4):24-26.
Timber supply in Canada.

1780 Pearse, P.H. and Williams, D.H., 1987. **Economic implications of timber supply regulation.** In: Kaiser, F. and Brown, P., comp. Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Use Forestry. pp.89-103.
The purpose of this paper is to show "how regulatory decisions about short and long-term timber supply utilization standards, silviculture, and extensive margins of resource use bear on the regulated rate of harvest, and how they cause divergence from economically optimum solutions." (p.90)

1781 Petteys, E.Q.P., Peter, S., Rugg, R., and Cole, T.G., 1986. **Timber volumes in the mangrove forests of Pohnpei, Federated States of Micronesia.** U.S. Forest Service, Resource Bulletin PSW-19. 2 pp.

1782 Repo, S., 1986. **[Wood consumption, total drain and forest balance in Finland, 1984-1986.]** Folia Forestalia no.675. 48 pp.
In Finnish with English summary.

1783 Royer, J.P., 1987. **Determinants of reforestation behavior among southern landowners.** Forest Science 33:654-667.
"Accurate models of reforestation behavior are important to projecting the nation's softwood timber supplies and deciding on appropriate public responses, if any, to encourage tree planting." (p.654)

1784 Strauss, C.H. and McWilliams, W.H., 1987. **Potential sawtimber availability in northcentral Pennsylvania: The next three decades.** Northern Journal of Applied Forestry 4:119-124.

1785 Tedder, P.L., LaMont, R.N., and Kincaid, J.C., 1987. **The timber resource inventory model (TRIM): A projection model for timber supply**

and policy analysis. U.S. Forest Service, General Technical Report PNW-GTR-202. 82 pp.
TRIM is a yield table projection system developed for timber supply projections and policy analysis.

1786 Tunak, S., 1985. **[Methodological questions of prognosis of need for timber in the Slovak Socialist Republic.]** Acta Facultatis Forestalis Zvolen 27:259-270.
In Czech, with summaries in English, German, and Russian.

1787 Yusuf, H., 1984. **Analyses of log supply from Peninsular Malaysia.** Malaysian Forester 47(1/2):125-137.
Several forecasts of log supply are reviewed: Ways of increasing the timber supply are outlined.

TIMBER SALES

1788 Atkin, D., 1986. **Categorically excluding the public**. Forest Watch 7(5):9-14.
The author contends that many Forest Service timber sales "are being sold without formal documentation of environmental analyses - they are being designated 'categorical exclusions'."

1789 Bassman, J.H. and Adams, D.L., 1987. **Below-cost timber sales: Meeting national forest regeneration requirements**. In: LeMaster, D.C. et al., eds. Below-cost sales. pp.97-111.
"Requirements for regenerating National Forest lands following harvest were specified by the National Forest Management Act of 1976." (p.97)

1790 Bennett, R.G., 1987. **Below-cost sales: A concern that just doesn't ring true**. In: LeMaster, D.C. et al., eds. Below-cost sales. pp.9-11.

1791 Emerson, P.M., 1987. **An overview of the below-cost timber sales issue**. In: LeMaster, D.C. et al., eds. Below-cost sales. pp.1-7.

1792 Gunter, J. and Rozier, H., 1987. **Timber marketing - surviving tough times**. Forest Farmer 46(9):20-21.
Selling stumpage.

1793 Hagenstein, P.R. et al., 1987. **Below-cost sales: Impact on timber prices**. Journal of Forestry 85(8):30-32.
Below-cost timber sales. Co-authors are: C.S. Binkley, W.E. Bruner, P.A. Cardellichio, and W.F. Hyde.

1794 Hoover, W.L., 1987. **Legal background on timber sale contracts revisited - implications of Baxter v. Lyttle**. Purdue University, Dept. of Forestry and Natural Resources, Indiana Forest Products Marketing and Wood Utilization Report, Bulletin 189:29-32.
Reports on a case heard before the Indiana Supreme Court.

1795 Hyde, W.F. and Daniels, S.E., 1987. **Below-cost timber sales and community stability**. In: LeMaster, D.C. et al.,eds. Below-cost sales. pp.139-145.
"Community stability is one of the objectives which the Forest Service intends to satisfy with below-cost timber sales. This paper examines that objective - and the success of the Forest Service in achieving it - through its maintenance of a timber harvest schedule different from a fully market responsive harvest schedule." (p.139)

1796 Jackson, D.H., 1987. **Why stumpage prices differ between ownerships: A statistical examination of state and forest service sales in Montana**. Forest Ecology and Management 18:219-236.

1797 Kelley, C.R., 1986. **Representing the Arkansas timber owner in timber sale transactions: Some contract drafting considerations**. University of Arkansas at Little Rock Law Journal 8:637-682.

1798 Krutilla, J.V., 1987. **Below-cost timber sales: The continuing controversy**. Resources 86:13-14.

1799 Krutilla, J.V., 1987. **Below-cost sales: Tying up the loose ends of the National Forest Management Act**. Journal of Forestry 85(8):27-29.
Below-cost timber sales.

1800 LeMaster, D.C., Flamm, B.R., and Hendee, J.C., editors, 1987. **Below-cost sales: A conference on the economics of national forest timber sales**. Washington, DC, Wilderness Society. 266 pp.
Proceedings of a conference sponsored by the Wilderness Society, Washington State University, Dept. of Forestry and Range Management, and University of Idaho, College of Forestry, Wildlife and Range Sciences, Feb.17-19, 1986, Spokane, Washington. Selected papers are indexed in this issue.

1801 Myers, P.C., 1987. **Below-cost timber sales: An overview of the issue-understanding the linkages**. In: LeMaster, D.C. et al., eds. Below-cost sales. pp.13-21.

1802 Rideout, D.B., 1987. **Below-cost sales: A Rocky Mountain perspective**. Journal of Forestry 85(8):33-36.
Below-cost timber sales. Administering multipurpose forest management.

1803 Risbrudt, C.D., 1986. **Policy evaluations for U.S. federal timber sale accounting system development**. In: Tikkanen, I., ed. Analysis and evaluation of public forest policies. Silva Fennica 20:302-305.

1804 Society of American Foresters, 1987. **The SAF position on below-cost timber sales**. Journal of Forestry 85(8):37.
"Redefining the costs of forest management."

1805 U.S. Forest Service, 1984. **Timber sale volume: A productivity improvement analysis**. U.S. Forest Service, Productivity Improvement Team. 32 pp. + 19 pp. appendix.
"The objective of this analysis is to identify ways to increase productivity or to reduce costs in timber sale volume determination."

1806 Wilkinson, C.F. and Anderson, H.M., 1987. **Below-cost sales: Are they legal?** Journal of Forestry 85(8):20-26.
Below-cost timber sales.

SOCIAL SCIENCES APPLIED TO FOREST INDUSTRIES

WOOD-USING INDUSTRIES

1807 Baharuddin, H.G., 1984. **Peninsular Malaysia's timber industry in perspective.** Malaysian Forester 47(1/2):70-79.

1808 Blyth, J.E., McGuire, D.H., and Smith, W.B., 1987. **Indiana timber industry - an assessment of timber product output and use.** U.S. Forest Service, Resource Bulletin NC-102. 34 pp.

1809 Brinker, R.W. and Jackson, B.D., 1987. **Timber harvesting and wood procurement research needs perceived by forest industry in Louisiana and Texas.** Forest Products Journal 37(7/8):48-50.
The forest industry in Texas and Louisiana was surveyed in 1984 to determine the relative importance of problem areas within the timber harvesting and wood procurement disciplines.

1810 Brock, S.M., Patterson, D.W., and Ruan, J.O., 1987. **Economic feasibility of cogeneration at sawmills in West Virginia.** West Virginia University, Agricultural and Forestry Experiment Station, Bulletin 697. 29 pp.

1811 Burch, W.G., 1987. **Future trends in the B.C. forest industry: Moving beyond the myths.** Forestry Chronicle 63:253-259.

1812 Burcham, V., editor, 1986. **Secondary manufacturers of wood products directory.** Michigan Dept. of Natural Resources, Forest Management Division; Michigan Dept. of Commerce, Business Development Division. 280 pp.
"The purpose of this directory is to enhance product marketing between Michigan's wood using industry and potential consumers of wood products." The directory is indexed by industry name, industry type, and wood products manufactured.

1813 Canadian Pulp and Paper Association, 1985. **Pulp and paper from Canada.** Montreal, Canadian Pulp and Paper Association. 52 pp.
"A trade directory of the products manufactured for sale by the member companies of the Canadian Pulp and Paper Association." (cover) Includes a 26 page section containing addresses of companies, followed by a map of mill locations. The final section lists products of the mills.

1814 Colgan, C.S., Irland, L.C., and Benson, J., 1986. **The natural resource industries of Maine: An assessment and statistical portrait.** Maine State Planning Office and Finance Authority of Maine. 135 pp.
Covers agriculture, fishing, and forest products.

1815 Cubbage, F. and Harris, T., Jr., 1986. **The economics of using juvenile wood for southern pine products.** Paper presented at the Southeastern Section Annual Meeting, Forest Products Research Society, Savannah, GA, Nov.6-7, 1986. 15 pp.

1816 Epperson, W.W., 1986. **Furniture industry trends and outlook effects on the hardwood lumber industry.** In: Annual Hardwood Symposium of the Hardwood Research Council. Proceedings 14:9-19.

1817 Finance Authority of Maine, 1986. **A strategy for investing in the natural resource industries of Maine.** Finance Authority of Maine, Natural Resources Finance and Marketing Board. 41 pp.
The natural resource industries of Maine consist primarily of the agricultural, forest products, and fishing industries.

1818 Hagner, S., 1987. **From mining to industrial forestry: Some Canadian forest problems in an international perspective.** In: Fulthorpe, R. and Buffinga, A., eds. Woodshock: The perception and use of forested land in Canada. pp.33-36. (JD)

1819 Herring, R., 1987. **Current problems facing the Canadian forest industry.** In: Fulthorpe, R. and Buffinga, A., eds. Woodshock: The perception and use of forested land in Canada. pp.44-48. (JD)

1820 Hii, G.S.C., 1984. **Sawmill operations: An analysis of costs.** Malaysian Forester 47(1/2):138-145.
The cost of Ramin saw timber production is investigated.

1821 Jones, K.D. and Zinn, G.W., 1987. **Forests and the West Virginia economy. Volume 7: The business climate for forest-based industries in West Virginia.** West Virginia Agricultural and Forestry Experiment Station, Bulletin 691-volume 7. 21 pp.

1822 Marcin, T.C., 1987. **The outlook for the use of wood products in new housing in the 21st century.** Forest Products Journal 37(7/8):55-61.
"This paper examines recent trends in the use of wood products for housing and discusses future prospects for end uses such as framing, sheathing, and exterior siding." (p.55)

1823 McCoy, D.R. and Chang, S.J., 1983. **The secondary wood-using industries in Kentucky: An economic analysis.** Kentucky Agricultural Experiment Station, Bulletin 719. 68 pp.
One of the objectives of this study was to document the decline of the secondary wood-using industries in Kentucky.

1824 McKean, C., 1987. **Sawmills in Ecuador: A study of small sawmilling enterprises in the Province of Pichincha.** Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.5. [94] pp.

1825 McKean, C., 1987. **The context and strategy for growth of small furniture enterprises: The Province of Guayas.** (Ecuador) Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.16. [42] pp.

1826 Mussack Morales, M.F., 1987. **Suggestions on improving log supply to Artepractico's sawmill in Cuenca, Ecuador.** Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.24. 45 pp.

"The main objective of this study is to analyze the feasibility of relocating the Artepractico sawmill to achieve higher use of its installed capacity." (p.3)

1827 Oregon Economic Development Department, 1986. **The Oregon advantage for the wood products industry.** Salem, Oregon Economic Development Department. 32 pp.

Points out the advantages of locating a wood products industry in Oregon.

1828 Pellicane, P.J., Hilson, B.O., and Smith, I., 1986. **A critical appraisal of the prospects for the United Kingdom glulam industry.** Journal of the Institute of Wood Science 10:202-209.

"The current state of the United Kingdom glulam industry is reviewed together with the factors which will influence its prospects in the medium to long term." (p.202)

1829 Petriceks, J., 1987. **Bolivian forest resource and forest industry.** Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.7. 49 pp.

1830 Prestemon, D.R. and Tibben, J., 1984. **Directory of sawmills, veneer mills, and pulp mills in Iowa.** Iowa State University, Cooperative Extension Service, Pm-1161. 16 pp.

1831 Prestemon, D.R. and Anders, V.K., 1986. **Directory of wood-using industries of Iowa.** Revised, 1986. Iowa State University, Cooperative Extension Service, Pm-631. 16 pp.

1832 Puusepp, J., 1987. **Economic realities in the Canadian forest products industry.** In: Fulthorpe, R. and Buffinga, A., eds. Woodshock: The perception and use of forested land in Canada. pp.39-44. (JD)

1833 Random Lengths, 1987. **Random Lengths buyers' and sellers' guide: A directory of the forest products industry.** 1987 edition. Eugene, Oregon, Random Lengths Publications, Inc. 655 pp.

Provides information about companies, their products, and their staffs. Arrangement is by type of business and company location. Primary and secondary manufacturers are listed by geographic region, while wholesalers and export/import firms are broken out by state and province.

1834 Shimotori, S. and Takahashi, K., 1986. **The development of timber-related industries and fluctuations in timber supply and demand in Hokkaido after World War II.** Research Bulletins of the College Experiment Forests, Hokkaido University 43:161-175.

The authors analyze "historically the development of Hokkaido's timber-related industries responsible for the variations of timber demand and supply influenced by forest resources and economic growth after World War II." (p.161)

1835 Slooten, H.J. van der, 1987. **Research and technical assistance needs of the woodworking industry in Ecuador**. Research Triangle Park, NC, Southeastern Center for Forest Economics Research, FPEI Working Paper no.4. 19 pp.
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